

CONTRACT AWARD		STATE OF ALASKA HQ, STATE EQUIPMENT FLEET (Contracting Authority) 2200 E. 42nd Avenue Anchorage, Alaska 99508 (907-269-0800)		CONTRACT AWARD NUMBER	
				CA 1608425	
ORDERING DEPARTMENT HEADQUARTERS, STATE EQUIPMENT FLEET 2200 E. 42ND AVENUE ANCHORAGE, ALASKA 99508		COMMODITY CODE		DATE OF CONTRACT	
		NUMBER & PERIOD OF RENEWAL OPTIONS		PR NO./DATE ASSIGNED	
		DATE INITIAL CONTRACT BEGINS		DATE INITIAL CONTRACT ENDS	
CONTRACTOR NC MACHINERY ADDRESS 6450 ARCTIC BLVD ANCHORAGE, AK 99518 CONTACT NAME MIKE LICHTER TELEPHONE NUMBER (907) 786-7534		GS VENDOR CODE: ISSUED IN ACCORDANCE WITH BID # SEF- 1334 DATED: 6/20/08 PRICE ADJ. REQ. PRIOR TO EACH RENEWAL: CPI/PPI BASE INDEX POINTS & MO/YR: REVIEW DATE: RENEWALS EXPIRE (MO/YR): ESTIMATED VALUE OF INITIAL TERM: REBID:			
SEND INVOICES IN DUPLICATE TO: DOT&PF, STATE EQUIPMENT FLEET, 2200 E. 42ND AVENUE, ANCHORAGE AK 99508					
NOTE: This order constitutes a binding commitment between the State and the contractor listed hereon. Unauthorized modification without the expressed prior approval of the contracting authority will result in a financial obligation on the contractor and/or unauthorized State personnel making the change.					
DESCRIPTION					
THREE (3) YEAR AIP CONTRACT MOTOR GRADERS FOR RURAL ALASKA AIRPORTS CONTRACTING OFFICER LYNDA W. SIMMONS PHONE: (907) 269-0788 TABLE OF CONTENTS I. STANDARD TERMS & CONDITIONS II. SPECIAL TERMS & CONDITIONS III. PRICE SCHEDULE IV. SPECIFICATIONS					
CONTRACTING AUTHORITY NAME & TITLE LYNDA SIMMONS, CONTRACTING OFFICER III				SIGNATURE	
TELEPHONE NO: 907-269-0793 FAX NO: 907-269-0801					
IMPORTANT 1. Contract award number and ordering department name must appear on all invoices and documents relating to this order. 2. The State is registered for tax free transactions under Chapter 32, IRS Code Registration No. 92-601185. Items are for the exclusive use of the State and not for resale.					

SECTION I
STANDARD TERMS AND CONDITIONS

- 1.0 ACCESSORIES:** When accessories are supplied, they must be certified to be compatible with the rest of the equipment. Certification will be written evidence satisfactory to the State that the accessories are compatible. The contractor's failure to supply this evidence within the time required by the State will cause the State to consider the bid non-responsive and reject the contract.
- 2.0 AMENDMENTS:** Contract terms shall not be waived, altered, modified, supplemented or amended without prior written approval of the Contracting Officer.
- 3.0 ASSIGNMENT:** A contractor may not assign any portion of a contract unless authorized in advance and in writing by the Contracting Officer.
- 4.0 COMPLIANCE WITH ALL GOVERNMENT REGULATIONS:** The contractor must comply with all applicable federal, state, and borough regulations, codes, and laws, and pay all applicable federal, state, and borough taxes, and is liable for all required insurance, licenses, permits, and bonds. Failure to comply with such requirements shall constitute a breach of contract and shall be grounds for contract cancellation. Damages or costs resulting from noncompliance shall be the sole responsibility of the contractor.
- 5.0 CONFLICT OF INTEREST:** A person employed by the State of Alaska may not seek to acquire, be a party to, or possess a financial interest in, this contract if they are an employee of the administrative unit that supervises the award of this contract or they have the power to take or withhold official action to affect the contract.
- 6.0 CONTRACT PERIOD:** Three (3) year contract to purchase AIP motor graders and wheel loaders. There are no options to renew.
- 7.0 DEFAULT:** In case of contractor default, the State may procure the goods or services from another source and hold the contractor responsible for any resulting excess costs and may seek other remedies under law or equity. Alaska Statutes and Regulations provide for suspension and disbarment of non-responsible bidders.
- 8.0 DELIVERY:** All deliveries shall be F.O.B. final destination point with all transportation and handling charges paid by the contractor. Responsibility and liability for loss or damage shall remain with the contractor until final inspection and acceptance when responsibility shall pass to the State except as to latent defects, fraud and contractor's warranty obligations.
- 9.0 DISCONTINUED ITEMS:** In the event an item is discontinued by the manufacturer during the life of the contract, another item may be substituted, provided that the contracting officer makes a written determination that it is equal or better than the discontinued item and provided that it is sold at the same price or less than the discontinued item.
- 10.0 DISPUTES:** Any disputes arising out of this solicitation shall be resolved under the laws of Alaska. An appeal or any original action to enforce any provision of this agreement must be in the superior court for the First Judicial District of Alaska.

11.0 FORCE MAJEURE (Impossibility to perform): Neither party to this contract shall be held responsible for delay or default caused by acts of God and/or war, which is beyond that party's reasonable control. The State may terminate this contract upon written notice after determining such delay or default will reasonably prevent successful performance of the contract.

12.0 INDEMNIFICATION: The contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the contractor under this agreement. The contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the contractor and the independent negligence of the contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the contracting agency's selection, administration, monitoring, or controlling of the contractor and in approving or accepting the contractor's work.

13.0 INSPECTIONS: Goods furnished under this contract are subject to inspection and test by the State at times and places determined by the State. If the State finds goods furnished to be incomplete or not in compliance with contract specifications, the State may reject the goods and require the contractor to either correct them without charge or deliver them at a reduced price, which is equitable under the circumstances. If the contractor is unable or refuses to correct such goods within a time deemed reasonable by the State, the State may cancel the order in whole or in part. Nothing in this paragraph shall adversely affect the State's rights as buyer, including all remedies and rights granted by Alaska statutes.

14.0 INSURANCE:

14.1 Without limiting contractor's indemnification, it is agreed that contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a 30-day prior notice of cancellation, nonrenewal or material change of conditions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

14.2 Proof of insurance is required for the following:

14.2.1 Workers' Compensation Insurance: The contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the State.

14.2.2 Commercial General Liability Insurance: Covering all business premises and operations used by the contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per occurrence.

14.2.3 Commercial Automobile Liability Insurance: Covering all vehicles used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per occurrence.

14.3 Failure to supply satisfactory proof of insurance within 10 days of the contract award will cause the State to declare the contractor non-responsive and to reject the contract.

15.0 ITEM UPGRADES: The State reserves the right to accept upgrades to models on the basic contract when the upgrades improve the way the equipment operates or improve the accuracy of the equipment. Such upgraded items must be at the same price as the items in the basic contract.

16.0 NEW EQUIPMENT: Equipment offered in response to this ITB must be new equipment. New equipment means equipment that is currently in production by the manufacturer and is still the latest model, edition or version generally offered. The equipment must be warranted as new by the manufacturer and may not have been used for any purpose, other than display (not demonstration), prior to its sale to the State. The State will not accept remanufactured, used or reconditioned equipment. It is the contractor's responsibility to ensure that each piece of equipment delivered to the State complies with this requirement. A contract's failure to comply with this requirement will cause the State to seek remedies under breach of contract.

17.0 PAYMENT: Payment for agreements under \$500,000 for the undisputed purchase of goods or services provided to a State agency, will be made within 30 days of the receipt of a proper billing or the delivery of the goods or services to the location(s) specified in the agreement, whichever is later. A late payment is subject to 1.5% interest per month on the unpaid balance. Interest will not be paid if there is a dispute or if there is an agreement, which establishes a lower interest rate or precludes the charging of interest.

18.0 SEVERABILITY: If any provision of this contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected.

19.0 SHIPPING DAMAGE: The State will not accept or pay for damaged goods. The contractor must file all claims against the carrier(s) for damages incurred to items in transit from the point of origin to the ultimate destination. The State will provide the contractor with written notice when damaged goods are received.

20.0 STANDARD AND SPECIAL TERMS AND CONDITIONS: The terms and conditions of this section are standard to State of Alaska, Department of Transportation and Public Facilities, Statewide Equipment Fleet contracts for the purchase of goods. There may also be other special terms and conditions in an Invitation to Bid or Request for Proposal which apply only to this contract. In the event of a conflict between the standard and special terms and conditions, the Special Terms and Conditions take precedence.

- 21.0 SUCCESSORS IN INTEREST:** This contract shall be binding upon successors and assigns.
- 22.0 SUITABLE MATERIALS:** All materials, supplies or equipment offered by a contractor shall be new, unused, of recent manufacture, and suitable for the manufacturer's intended purpose unless the specifications allow for used, rebuilt or remanufactured equipment.
- 23.0 TAXES:** Prices quoted in contracts must be exclusive of federal, state, and local taxes. If the contractor believes that certain taxes are payable by the State, the contractor may list such taxes separately, directly below the bid price for the affected item. The State is exempt from Federal Excise Tax because articles purchased are for the exclusive use of the State of Alaska.
- 24.0 USE OF BRAND OR TRADE NAMES:** Brand or trade names used by the State in contract specifications are for the purpose of describing and establishing the standard of quality, performance and characteristics desired and are not a statement of preference nor are they intended to limit or restrict competition. Contractors may submit bids for substantially equivalent products to those designated unless the Invitation to Bid provides that a specific brand is necessary because of compatibility requirements. All such brand substitutions shall be subject to the State's approval.
- 25.0 WARRANTY:** Unless otherwise stated, all equipment shall be new and current model and shall carry full factory warranties. The contractor warrants all goods delivered to be free from defects in labor, material and manufacture and to be in compliance with contract specifications. All implied or expressed warranty provisions of the Uniform Commercial Code apply. All warranties shall be for and benefit the State.
- 26.0 HOLD OVER:** The State and the contractor agree that any holding over the contract excluding any exercised renewal options, shall remain in full force and effect. The State and the contractor also agree to provide written notice to the other party of the intent to cancel such month-to-month extension at least thirty (30) days before the desired date of cancellation.

SECTION II

SPECIAL TERMS AND CONDITIONS

1.0 DELIVERY:

- 1.1 **Pre-delivery service:** Prior to delivery, each vehicle, piece of equipment, or attachment shall be serviced and inspected by the dealer or his agent. A certification of this inspection must include the following (as applicable to the type of equipment):
 - 1.1.1 Dealer and vehicle identification
 - 1.1.2 Check-off of service and inspection performed including a list of all fluids including type weight and specification that are in the equipment as delivered for all fluid compartments.
 - 1.1.3 The vehicle's crankcase, differential and transmission, and other fluid compartments shall be filled to the manufacturer's recommended capacity.
 - 1.1.4 Fuel tank shall be filled to at least register a minimum ¼ full on the fuel gauge, unless restricted by the commercial carrier, when the vehicle arrives at the delivery location.
 - 1.1.5 The vehicle shall be clean and free from defects when delivered and should be ready for immediate and continued use upon delivery.
 - 1.1.6 Units delivered in an incomplete state, or that have deficiencies per the specification, are subject to the damage charges as noted in paragraph 4.0 below.”
- 1.2 **Delivery Receipt:**
 - 1.2.1 A delivery receipt will be required for each unit delivered. This form will be supplied by the State Equipment Fleet prior to delivery. The receipt must be filled out by the vendor, and acknowledged by state receiving personnel by signature and date of actual receipt of equipment. One copy of this delivery receipt is to be given to the state-receiving agency. The original shall accompany the vendor's invoice to support and properly identify the vehicle delivered.
 - 1.2.2 Vendors are cautioned and advised that such delivery forms or other receiving type documents will not in any way be construed to mean the state has formally and fully accepted unit(s) referenced thereon as complete and meeting every specification set forth. Regional Equipment Managers are to be contacted regarding delivery coordination and contacts.
 - 1.2.3 Under no conditions will warranty documents be presented at time of delivery for signature. Only the Contracting Officer or designee may sign warranty documentation.

2.0 LINE SHEETS/BILL OF MATERIALS:

- 2.1 It is required within 30 days after delivery that the contractor provide a comprehensive listing of all components used to assemble the unit.
- 2.2 This includes any components installed by the manufacturer or any subcontractor or the contractor.
- 2.3 Information will include at a minimum, when available, make, model serial number on items such as engines, transmissions, axles, tires, bodies, plows, snow wings, belly blades, cranes, etc. The listings will be specific to each piece of equipment and will be provided on an individual CD for each unit delivered.
 - 2.3.1 On after-market items that are installed, part numbers with descriptions, such as, but not limited to hydraulic fittings, are to be provided.
- 2.4 A minimum of four (4) CD's per unit are to be provided and marked with the make, model, and last main numbers of the units serial number or State PO number.

3.0 F.O.B. POINT:

- 3.1 The F.O.B. point for all items purchased under this contract is the final destination anywhere within the State of Alaska. Ownership of and title to the ordered items remains with the contractor until the items have been delivered at their final destination and are accepted by the State.
- 3.2 The cost of shipping and delivery for orders beyond the limits of Seattle/Tacoma dock will be handled as follows. The contractor will prepay the shipping and delivery charges to any destination named by the State in its order. The contractor will charge-back those shipping and delivery charges to the State as a separate line item on the State's invoice.
- 3.3 All shipping charges over \$100 must be documented by a copy of the actual shipping invoice and received with the invoice charge to the State.

4.0 DAMAGES FOR LATE DELIVERY AND NON-CONFORMING GOODS:

- 4.1 Time is of the essence in this contract. The contractor is expected to deliver goods that conform in all material respects to the contract specifications on or before the date provided therein, as may be amended by written agreement of the parties.
- 4.2 In the event that the goods are delivered late or in the event that the goods do not conform in all material respects to the contract specifications, the State shall be entitled to offset against the Contract Price, as **liquidated damages** and not as a penalty, **an amount equal to:**
Motor Graders - **\$445.00** per day for Class 352, **\$475.00** per day for Class 353
multiplied by the number of days elapsing between the delivery date provided in the specifications and the date that conforming goods are delivered to the State. The number of days for which liquidated damages shall apply shall include, in the case of non-conforming goods, the time reasonably necessary for the State to inspect the goods.
- 4.3 These liquidated damages represent a reasonable estimate of amounts necessary to compensate the State for loss of use of the goods during the period in which the

goods would have been available to the State if conforming goods had been timely delivered.

5.0 WARRANTY: (Note: Language on warranty may vary from one item to another depending on the type of equipment and particular requirements of the ITB.)

5.1 **MOTOR GRADERS:** Unless otherwise stipulated by this contract, the contractor will provide a five-year (60-month), two-part warranty. It is estimated that usage of these machines will be 600 hours per year on each unit. (Added per Amendment #1)

5.1.1 Part One:

5.1.1.1 Full (100%) Parts and Labor Warranty Coverage of all components for the first 24-months, from the date the unit is placed into service at the assigned location. All travel costs to and from the manufacturer's warranty service center will be billed as follows:

5.1.1.1.1 Travel Labor Charge, as per Section III – Price Schedule. Travel labor will only be reimbursed for the time the employee is traveling within Alaska.

5.1.1.1.1.1 Mileage Charge, as per Section III – Price Schedule. Mileage will only be reimbursed for travel within Alaska.

5.1.1.1.1.2 Meals are paid at actual and charges must be accompanied by receipts and are not to exceed the State authorized \$60.00 per day. Meals are only paid for time in Alaska.

5.1.1.1.1.3 Transportation, such as airfare, shall be reimbursed at actual and all charges are to be accompanied by a receipt/copy of the ticket. Transportation will only be paid for transportation within Alaska.

5.1.1.1.1.4 Lodging shall be reimbursed at actual and shall not exceed \$150.00 per night unless no other lodging is available. Requests for reimbursement must be accompanied by a receipt. Lodging will only be paid for lodging within Alaska.

5.1.2 Part Two:

5.1.2.1 Additional Warranty Coverage for the succeeding 36-months (years three, four, and five) to be 100% parts only (or component exchange) for all major power and drive train components, including freight, to place the unit back into good operating condition, from the date the unit is placed in service.

- 5.1.2.2 Major power and drive train components include the engine, transmission, torque converter, differential(s), planetary drives, main hydraulic pump, and any other major components recognized in the equipment industry as belonging to the power or drive train.
 - 5.1.2.3 Should the manufacturer's standard warranty exceed the minimum state warranty requirements, the manufacturer's warranty will run in conjunction with and enhance the state's warranty, then continue for the remainder of its term.
 - 5.1.3 The contractor is responsible for all freight, transportation, and per diem. Per diem and mileage will be paid at the applicable rate for State employees. Per diem and mileage will commence when travel status begins and will continue until return travel status is completed. Air transportation will be reimbursed for actual cost for coach (economy class). The state will not pay a contractor's hourly shop rate during travel or per diem status
 - 5.1.4 If the state receives from any manufacturer or supplier additional or extended warranty on the whole or any component of the unit, in the form of time and/or mileage, including any pro rata arrangements, or the manufacturer generally extends to fleet customers a greater or extended warranty coverage, the state shall receive corresponding warranty benefits.
- 5.2 **GENERAL WARRANTY REQUIREMENTS FOR ALL EQUIPMENT:**
- 5.2.1 **Warranty Exceptions:**
 - 5.2.1.1 For clarification, warranty does not apply to normal wear and tear or maintenance items, accident damages, misuse of equipment or failure to operate or maintain equipment as prescribed by vendor/manufacturer.
 - 5.2.2 **Warranty on Attachments:** Attachments are to have the same warranty coverage as the host unit.
 - 5.2.3 **In-Service Date:**
 - 5.2.3.1 Warranty on vehicles not placed in service immediately upon receipt because of time lag to construct body components and/or installation of special equipment, or due to seasonal usage or other delay, shall be warranted from the date the vehicle is placed in service. The receiving agency shall notify the vendor/manufacturer in writing of the actual "in service" date. Notification of the requirement for delayed warranty will be provided on delivery orders whenever possible.
 - 5.2.4 **Authorized Warranty Dealer (Contractor) and Subcontractor:** For the purpose of this contract, the contractor must meet the following applicable requirements:
 - 5.2.4.1 Contractor must:

- 5.2.4.1.1 Possess a current Alaska Motor Vehicle Dealer License pursuant to AS 08.66.010 through AS 08.66.090, when offering motor vehicles, trailers or semi-trailers and;
 - 5.2.4.1.2 be a manufacturer(s) authorized warranty service dealer for each unit, and;
 - 5.2.4.1.3 have the capability to provide authorized warranty servicing and repair work within Alaska.
- 5.2.4.2 Contractor, if appropriate, shall submit the name, address, Alaska business license of any subcontractor who will provide the warranty servicing and repair work referenced in paragraph 5.1 above. The contractor must provide with the bid package contractual documentation or agreements with the subcontractor insuring the state that the subcontractor will provide complete contract performance on behalf of the contractor as set forth in this ITB and verification that the work provided will maintain manufacturer's warranty requirements.
 - 5.2.4.2.1 The use of a subcontractor does not exclude the provisions as noted in paragraphs 5.2.4.1, and subsequent paragraphs, as requirements to the contractor.

5.2.5 **Warranty Claims:**

- 5.2.5.1 Warranty will be provided at the unit's assigned (in-service) location as shown in this contract, Section III - Price Schedule. Because of the remote location of some equipment it is not always practical to deliver equipment to authorized warranty repair facilities. In these cases, the vendor may perform warranty work at the state's location or, the State of Alaska, at its discretion, reserves the right to perform the warranty work and be reimbursed by the vendor.
- 5.2.5.2 The State of Alaska has established a warranty procedure whereby the vendor is to be notified via letter, telex, fax, telegram, etc. that warranty work needs to be performed. If time is of the essence, a telephone call confirmed by one of the above written procedures may be utilized. The vendor must notify the state immediately that it will begin to perform the warranty work at the equipment location within 48 hours from receipt of written notification. The State may, at its discretion, proceed to make warranty repairs with its own work force in the case of emergency situation or to preclude excessive downtime (greater than 48 hours).
- 5.2.5.3 Failure to notify the State, that the vendor intends to begin to perform warranty work promptly under this paragraph, by the end of the business day following the states notification that

work is required to be performed, is considered a contractual breach.

5.2.6 The vendor will be invoiced for required warranty work performed by the state. The shop rate to be charged for warranty work performed by the state will be **\$79.00** per hour. Labor hours to be charged will be in accordance with appropriate flat rate manuals. If flat rate manuals do not cover the labor operation, actual repair time will be used. Warranty work performed by state shop personnel at locations where no shop personnel are permanently stationed may be subject to travel expenses incurred involving those warranty repairs.

5.2.7 Factory Recall:

5.2.7.1 Nationwide factory recall or product update programs are the responsibility of the vendor and/or manufacturer. The State will attempt to bring affected equipment to an authorized repair facility. However, because of the remoteness of some equipment this is not always practicable or economical. In such cases, factory recall and modification work will be handled the same as warranty work. Factory recall notices sent to the state should, in addition to serial number, include model, year, and dealer from who purchased.

5.2.8 **Hazardous Material:**

5.2.8.1 Due to concerns about liability resulting from hazardous materials being left at the work site on State of Alaska property, effective immediately no vendors will be allowed to use the State of Alaska rural airport facilities to perform warranty work unless they agree and sign a letter of intent stating that all waste products including oils, coolant and garbage will be removed from the work site. Vendors should note that in some village locations other suitable facilities might be available for rent from local residents or village authority.

6.0 REPAIR ORDERS AND DOCUMENTATION:

6.1 Any work performed by the contractor or approved subcontractor, whether warranty or any other work on a piece of equipment purchased under this ITB, will require a copy of the repair order, any invoices showing parts and commodities including oils and types used.

7.0 PUBLICATIONS:

7.1 Publications for each unit ordered are to be received by the State of Alaska no later than 10 days after receipt of the unit. Custom manuals may be delivered no later than 90 days after receipt of the unit. Delivery will not be considered complete until the publications for each unit have been received by the State of Alaska.

7.1.1 Note: Publications, when required, will be ordered on the same Purchase Order as the unit itself.

7.1.2 All manuals are to be pre-assembled in factory binders prior to delivery.

7.2 Service Manuals:

7.2.1 Complete set(s) to include applicable information covering prime unit and attachments:

7.2.2 Body, chassis, and electrical

7.2.3 Engine, transmission, and differential(s) (service and rebuild)

7.2.4 Electrical and Vacuum troubleshooting

7.2.5 Wiring diagrams

7.2.6 Service specifications

7.2.7 Engine/emission diagnosis

7.3 Parts Manuals:

7.3.1 Complete set(s) to include prime unit and attachments, including updates. If updates are not provided during the five-year warranty period, the State will order them from the manufacturer and bill the contractor for the full cost, including shipping.

7.3.2 Parts manuals are to be customized by serial number.

7.4 Operator's Manuals: Complete set(s) to include prime unit and attachments.

7.5 Quantities: As noted on Purchase Order.

7.6 Manuals: To be delivered to, and receipt signed by:

7.6.1 Person(s) as noted on the Purchase Order.

7.7 Service Bulletins, Etc.: The contractor must provide appropriate service bulletins, technical support bulletins, service letters, product support bulletins, and/or any other information type notifications that are sent out to the vendor or used by the manufacturer in the maintenance and report of the vehicle, equipment or attachments being provided. The intent of this clause is that the State of Alaska be provided notification of any and all changes or improvements that may affect the maintenance, reliability, longevity, and safety of our equipment. This information will be provided as soon as possible to the person as noted on the purchase order.

8.0 STATEMENT OF ORIGIN: The contractor will be required to furnish a Manufacturer's Statement of Origin for Automotive or Non-Automotive rolling stock for each unit. All such documents shall be forwarded to:

DOT&PF, HQ State Equipment Fleet
2200 E. 42nd Avenue Room #311
Anchorage, Alaska 99508

9.0 WEIGHT VERIFICATION SLIPS: A weight scale ticket of the completed unit is required to be included with the Statement of Origin.

10.0 INSPECTIONS:

- 10.1 The State's inspection of all materials and equipment upon delivery is for the sole purpose of identification. Such inspection shall not be construed as final or as acceptance of the materials or equipment if materials or equipment do not conform to contract requirements. If there are any apparent defects in the materials or equipment at the time of delivery, the State will promptly notify the contractor thereof. Without limiting any other rights of the State, the State at its option, may require the contractor to:
 - 10.1.1 repair or replace at contractor's expense, any or all of the damaged goods,
 - 10.1.2 refund the price of any or all of the damaged goods, or
 - 10.1.3 accept the return of any or all of the damaged goods.
- 10.2 Costs of remedying all defects, indirect and consequential costs of correcting same, and/or removing or replacing any or all of the defective materials or equipment will be charged against the contractor.

11.0 PRICE:

- 11.1 **Price Guarantee:** The contractor is responsible to maintain prices under the contract firm for **90 DAYS** after bid opening. All price increases or decreases must remain firm for the following **90 DAYS**.
- 11.2 **NO RETROACTIVE PRICE INCREASES WILL BE ACCEPTED.**
- 11.3 Price adjustments, increases or decreases, for subsequent orders, may be made by providing the Contracting Officer satisfactory evidence that all of the following conditions exist:
 - 11.3.1 The increase is a result of the increased cost at the manufacturer's level and not costs under the contractor's control, and that;
 - 11.3.1.1 The increase will not produce a higher profit margin for the contractor than that on the original contract, and that;
 - 11.3.1.2 The increase affects only the item(s) that are clearly identified by the contractor.
 - 11.3.1.3 Satisfactory forms of the evidence of the above facts may include a certified invoice from the manufacturer, or an affidavit from an independent professional price-tracking firm that is recognized by the industry as reputable and knowledgeable. The contractor must be able to show the difference between the prior year's price and the current difference in the price being requested.
- 11.4 **Price Decreases:** During the period of the contract, the contractor must pass on to the state all price decreases, such as fleet rebates. A contractor's failure to adhere strictly and faithfully to this clause will be considered a material breach of contract. The state reserves the right to cancel the contract if the contractor fails to properly perform the duties set out herein.

12.0 COOPERATIVE PURCHASING:

- 12.1 All requests to cooperatively purchase, by qualified political subdivisions, from the resulting contract shall be approved by the Contracting Officer.
- 12.2 At no time may the contractor change the terms and conditions, alter the price to another entity, which differs from the contractual price, nor charge undisclosed administrative fees to allow cooperative purchasing.

13.0 MANUFACTURER'S REBATE (INCENTIVES): In any circumstance during or prior to completion of the contract, whereupon the State of Alaska becomes eligible to receive a rebate for any vehicle purchased under this contract, it shall be the CONTRACTOR'S responsibility to inform the Contracting Officer in writing and to advise the procedures for obtaining such rebates.

14.0 REPLACEMENT PARTS:

- 14.1 The State of Alaska shall expect the dealer or manufacturer to provide replacement wear parts to the State of Alaska's Anchorage or Fairbanks facilities within two (2) working days of order or to Juneau's facility within seven (7) working days. All other parts must be available within ten (10) working days.
- 14.2 Back order procedures: Back orders are acceptable; however, the ordering shop shall be apprised at time of original orders as to the expected delay in delivery.
- 14.3 Warranty: All products supplied by the contractor shall be warranted against defects in materials and workmanship for a minimum of 90 days, commencing at the time of installation as long as the installation is within 12 months of purchase. The cost of any defective product and the labor required to replace the defective product shall be the obligation of the contractor.
 - 14.3.1 If the manufacturer's warranty exceeds the stated warranty then manufacturer's warranty supercedes.
 - 14.3.2 Parts Return: Within 12 months of purchase, the State is to be allowed to return new, parts with full refund, less shipping charges.
 - 14.3.3 Invoicing: Full description of item is required on all invoices, packing lists and billings.

15.0 BRAND NAME SPECIFICATION: For purposes of this ITB, certain vehicle accessories are specifically identified by brand name and model/part number. Only the listed brand name and model/part numbers are acceptable. Substitutes shall be not allowed.

16.0 ADDITIONS OR DELETIONS: The State reserves the right to add or delete items, agencies or locations as determined to be in the best interest of the State. Added items, agencies or locations will be related to those on contract and will not represent a significant increase or decrease in size or scope of the contract. Such additions or deletions will be documented via mutual agreement, will be at prices consistent with the original bid price margins, and will be evidenced by issuance of a written contract change notice from the Contracting officer.

17.0 CONTRACT ADMINISTRATION: The administration of this contract, including any/all changes, is the responsibility of the Contracting Officer, HQ State Equipment Fleet.

18.0 TRADE RESTRICTION CLAUSE (9 CFR Part 30.13FAA Order 5100.38)

- 18.1 The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:
 - 18.1.1 is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
 - 18.1.2 has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
 - 18.1.3 has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.
- 18.2 Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.
- 18.3 Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.
- 18.4 The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.
- 18.5 This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.
- 18.6 Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- 18.7 This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent

certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

19.0 CIVIL RIGHTS ACT OF 1964, TITLE VI – CONTRACTOR CONTRACTUAL REQUIREMENTS (49 CFR Part 21 AC 150/5100-15)

19.1 During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

19.1.1 **Compliance with Regulations.** The contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

19.1.2 **Nondiscrimination.** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

19.1.3 **Solicitations for Subcontracts, Including Procurements of Materials and Equipment.** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

19.1.4 **Information and Reports.** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the sponsor or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.

19.1.5 **Sanctions for Noncompliance.** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:

19.1.5.1 Withholding of payments to the contractor under the contract until the contractor complies, and/or

19.1.5.2 Cancellation, termination, or suspension of the contract, in whole or in part.

19.1.6 **Incorporation of Provisions.** The contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the sponsor or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

20.0 AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, SECTION 520 - GENERAL CIVIL RIGHTS PROVISIONS (Airport and Airway Improvement Act of 1982, Section 520, Title 49 47123, AC 150/5100-15, Para. 10.c)

20.1 The contractor assures that it will comply with pertinent statutes, Executive orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport a program, except where Federal assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon. In these cases the provision obligates the party or any transferee for the longer of the following periods: (a) the period during which the property is used by the airport sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits or (b) the period during which the airport sponsor or any transferee retains ownership or possession of the property. In the case of contractors, this provision binds the contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

21.0 DISADVANTAGED BUSINESS ENTERPRISES (49 CFR Part 26)

- 21.1 **Contract Assurance (§26.13)** - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.
- 21.2 **Prompt Payment (§26.29)** - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than **30** days from the receipt of each payment the prime contractor

receives from the **State of Alaska**. The prime contractor agrees further to return retainage payments to each subcontractor within [specify the same number as above] days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the **Contracting Officer**. This clause applies to both DBE and non-DBE subcontractors.

22.0 LOBBYING AND INFLUENCING FEDERAL EMPLOYEES (49 CFR Part 20, Appendix A)

- 22.1 No Federal appropriated funds shall be paid, by or on behalf of the contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant and the amendment or modification of any Federal grant.
- 22.2 If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any Federal grant, the contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobby Activities," in accordance with its instructions.

23.0 ACCESS TO RECORDS AND REPORTS (49 CFR Part 18.36(i), FAA Order 5100.38)

- 23.1 The Contractor shall maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

24.0 ENERGY CONSERVATION REQUIREMENTS (49 CFR Part 18.36 & Public Law 94-163)

- 24.1 The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

25.0 BREACH OF CONTRACT TERMS (49 CFR Part 18.36)

- 25.1 Any violation or breach of terms of this contract on the part of the contractor or their subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

26.0 RIGHTS TO INVENTIONS (49 CFR Part 18.36(i)(8) & FAA Order 5100.38)

- 26.1 All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed.

27.0 TRADE RESTRICTION CLAUSE (49 CFR Part 30.13 & FAA Order 5100.38)

- 27.1 The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:
- 27.1.1 is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
 - 27.1.2 has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
 - 27.1.3 has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.
- 27.2 Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.
- 27.3 Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.
- 27.4 The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.
- 27.5 This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.
- 27.6 Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to

exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

- 27.7 This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

28.0 TERMINATION OF CONTRACT (49 CFR Part 18.36(i)(2) & FAA Order 5100.38)

- 28.1 The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.
- 28.2 If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.
- 28.3 If the termination is due to failure to fulfill the contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
- 28.4 If, after notice of termination for failure to fulfill contract obligations, it is determined that the contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.
- 28.5 The rights and remedies of the sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

29.0 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION (49 CFR Part 29 & FAA Order 5100.38)

- 29.1 The contractor certifies, by acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the contractor or any lower tier participant is unable to certify to this statement, it shall have attached an explanation to the solicitation/proposal.

30.0 CLEAN AIR AND WATER POLLUTION CONTROL (49 CFR Part 18.36(i)(12) & Section 306 of the Clean Air Act & Section 508 of the Clean Water Act)

- 30.1 Contractors and subcontractors agree:
- 30.1.1 That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

- 30.1.2 To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued there under;
- 30.1.3 That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;
- 30.1.4 To include or cause to be included in any construction contract or subcontract which exceeds \$100,000 the aforementioned criteria and requirements.

31.0 BUY AMERICAN CERTIFICATE:

- 31.1 By submitting a bid/proposal, the contractor certifies that steel and each manufactured product, are produced in the United States, as defined in the clause Buy American - Steel and Manufactured Products for Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

31.2 EXCEPTIONS: NONE.

32.0 BUY AMERICAN PREFERENCES (Section 9129 of the Aviation Safety and Capacity Expansion Act of 1990 & Title 49 U.S.C. Chapter 501, AIP Program Guidance Letter 91-3)

- 32.1 The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program. The following terms apply:
 - 32.1.1 Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs b. (1) or (2) shall be treated as domestic.
 - 32.1.2 Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.
 - 32.1.3 Cost of Components. This means the costs for production of the components, exclusive of final assembly labor costs.
- 32.2 The contractor will be required to assure that only domestic steel and manufactured products will be used by the contractor, subcontractors, materialmen and suppliers in the performance of this contract, except those:

- 32.2.1 that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;
- 32.2.2 that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or
- 32.2.3 that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

32.2.4 Location of final assembly:

Company Name: **N.C. Machinery Company**

Physical Address: **6450 Arctic Boulevard**

City, State & Zip Code: **Anchorage, AK 99518**

32.3 Statement of final assembly:

32.3.1 **"140M and 160M assembled in Decatur, Illinois."**

32.4 **Percentage of U.S. Components:**

32.4.1 Provide a list of components meeting the requirement of "steel and manufactured products" listed above along with their dollar value, and summarize according to the following example to affirm that a minimum of 60 percent of all components are manufactured or produced in the United States.

32.4.2 Contractor's Affirmation of U.S. Componentry:

Percentage of U.S. Components **85%**

35.0 EQUIPMENT RELIABILITY:

35.1 Reliability of equipment is paramount importance to the State. It is the policy of SEF to require minimum levels of reliability from owned or leased equipment for it to be considered acceptable. Equipment offered for this contract must be capable of meeting the acceptable reliability standard stated below.

35.2 **Acceptable Reliability:** The state will monitor equipment reliability. Acceptable reliability for this contract is achieved when a machine achieves or maintains a Reliability Ratio (RR) equal to or exceeding the following:

35.2.1 A .95 (95 percent) RR during any consecutive 12-months (365 days) during the warranty period.

35.2.2 A .90 (90 percent) RR per month (defined by calendar days) during the consecutive 12-month period.

35.2.3 RR below the stated percentages do not meet minimum reliability requirements for state owned equipment.

35.3 **Machine Failure and Downtime:**

- 35.3.1 **Machine Failure** is any and all loss of capability to perform fully, as specified, which is not attributed to **Conditioned Failure**. Machine failure resulting in the unit being out of service is defined as **Downtime**.
- 35.3.2 **Conditioned Failure** is any machine failure attributable to accident, operator abuse or other external cause not attributable to a defect in the machine itself.
- 35.3.3 **Downtime** is the actual number of days or fractions of days that the equipment is in a state of Machine Failure. Downtime does not count time used for scheduled maintenance (including preventative maintenance and scheduled major overhauls), time lost for repair maintenance and scheduled major overhauls), time lost for repair of damage as a result of operator abuse or machine misapplication; or time lost as result of accident or an act of God. Downtime includes:
 - 35.3.3.1 Actual shop hours (and/or field repair hours) required to return unit to full operational status following machine failure, including trouble-shooting, repair, necessary replacement of parts, and necessary adjustments, plus
 - 35.3.3.2 Time lost waiting for parts and/or vendor assistance. "Waiting downtime" also applies if need for parts/assistance is discovered during routine maintenance and return to service is deemed counterproductive. In this case, "waiting time" clock begins with notice of need to vendor. Allowance may be considered in "waiting time" calculations if arrival of parts/ assistance is delayed by transportation shutdown, to include verifiable transportation scheduling difficulties such as infrequent flights as long as all reasonable alternatives have been exhausted. Parts and assistance are to be provided by the quickest means reasonably possible to avoid unnecessary delays and downtime.
- 35.3.4 **Out of Service Report (OSR):** Down time resulting from machine failure is the actual number of hours a machine is out of service as recorded on the OSR or in the Equipment Maintenance Management System (EMS).
- 35.3.5 The state will record all downtime on an OSR or EMS work order, which will be originated for each occurrence of downtime. The document will show the date and time a unit went down, the location where the machine was abused, the reason the machine is down, date and time the vendor was notified (if applicable), the date and time the machine was returned to service, and the total hours of downtime.
 - 35.3.5.1 The Contract Manager will finalize and approve the OSR or EMS work order. Both are available for Contractor review.
- 35.3.6 **Reporting Downtime:** The Contracting Officer will maintain documentation of all Downtime, and shall send copies of such documentation to the Contractor.

35.3.7 **Calculation of Reliability Ratio (RR):** RR is the mathematical ratio of operated time (uptime) to out of service time (downtime). The RR will be calculated according to the following formula:

$$35.3.8 \quad RR = \frac{\text{Days in a Month} - \text{Days Out of Service}^1}{\text{Days in a Month}^2} = \frac{DM-DO}{DM}$$

Note: ¹**Fractional Days** apply, i.e., a unit is out of service 8 hours in a 24 hour period equals 1/3 or .33% of a day.

² **A day** is allocated as 24 consecutive hours from 12:00 AM to 12:00 AM.

Example: 30 days DM with 2 days, 8 hours DT would result in:

$$RR = \frac{30-2.33}{30} = .92$$

35.3.9 **Unacceptable Reliability:** If an item of equipment fails to perform at an acceptable level of reliability during the warranty period, the Contracting Officer will notify the Contractor and request immediate remedy. Failure to remedy the piece of equipment within 30 days for failure will result in a breach of contract and the immediate return of the equipment and reimbursement of the original contract price, less shipping. A usage fee will also be deducted at \$10.00 per hour as noted on the hour meter.

35.3.10 Prior to return, the state will correct all reasonable cosmetic deficiencies (such as excessive rust) and those deficiencies that are directly related to damage due to accidents, misuse of equipment or failure to operate or maintain equipment as prescribed by vendor/manufacturer.

35.3.11 The tires will be serviceable with at least 50% remaining tread.

35.3.12 Oil samples, as per manufacturer's service manual recommendations, will be taken by State of Alaska Maintenance on the engine, transmission, differentials and hydraulics.

35.3.13 In the case of dispute, at the expense of the State, a qualified agent from Northern Adjusters, Inc., or another professionally recognized appraiser, may be commissioned for an independent claim appraisal. Such appraisal shall be binding upon the State and Contractor."

35.4 **PERFORMANCE BOND FOR WARRANTY & PERFORMANCE:**

35.4.1 The state does not have backup equipment in many of its locations. Consequently, new-unit reliability and warranty performance is of vital importance. To insure the highest possible reliability and warranty service this contract requires the contractor to post **performance security, in one of the forms listed below**, within 30 days of the first purchase order. The purpose of the posted performance deposit is to secure performance over the entire term of the warranty period for each unit purchased. The performance security must cover any remaining warranty in the event that the contractor is unable to or otherwise fails to complete the five-year warranty period. The amount of the performance deposit will be **\$50,000.00 for each CONTRACT**. Release of the performance security

will be contingent solely upon the acceptable completion of the terms of the original contract.

- 35.4.2 The Performance Deposit must be posted for a **TWO YEAR TERM, AND THEREAFTER ANOTHER TWO YEAR, THEN ONE YEAR, FINANCIAL GUARANTEE SECURITY OR SURETY BOND SECURED BY A SURETY COMPANY AGREED TO BY THE PARTIES TO THIS CONTRACT WILL BE PROVIDED WITHIN 90 DAYS OF THE EXPIRATION OF THE FIRST SECURITY. Failure to post the successive bond, OR to provide an alternate security as listed below, will be cause for breach of contract and immediate cancellation of any future orders.** The performance deposit will be valid from the date the unit is delivered is placed into service at the assigned location.
- 35.4.3 **Performance Bond:** A performance bond must be written in a form satisfactory to the state by a company authorized to do surety business in Alaska. The performance bond must provide that it is payable to the State of Alaska as security for the Contractor's full and faithful performance of the contract.
- 35.4.4 **Alternate Security:** In lieu of a performance bond, the contractor may post security in the form of a certified or cashier's check, or a certificate of deposit, to be returned to the Contractor provided that the Contractor fully and faithfully performs the contract, including all warranty obligations.
- 35.4.5 **Certified or Cashier's Check:** A certified or cashier's check, made payable to the State of Alaska.
- 35.4.6 **Certificate of Deposit:** A Certificate of Deposit (CD) made payable to the State of Alaska. Inclusion of other verbiage on the "payee" or "pay to" line will render the security unacceptable.

SECTION III
PRICE SCHEDULE

LOT #1

Item #	Unit	Description	Total \$ Amount
1a	ea.	Motor Grader, minimum 35,000 pound ----- operating weight with 14 foot moldboard, Color to be manufacturer's standard yellow. warranty as per Section III – Special Terms and Conditions. Per specification #352-AIP , contained herein. State Class #352 Motor Grader Year, Make & Model Offered: <u>2008 CATERPILLAR 140M</u>	<u>\$240,500.00</u>
1b	set	Emergency Steering (Spec 3.3.3) -----	<u>NO COST</u>
1c	ea	Push Block (Spec 10.1) -----	<u>\$2,500.00</u>
1d	ea	Scarifier (Spec 10.2) -----	<u>\$9,345.00</u>
1e	ea	State Class #856-12 Snow Wing (Spec 10.3) ----- Make & Model Offered: <u>HENKE AHW-12</u>	<u>\$17,550.00</u>
1f	ea	State Class #866 Multi-Directional H-D Plow ----- (Spec 10.4) Make & Model Offered: <u>HENKE BLG-XH LIFT w/FV-12 PLOW</u>	<u>\$27,350.00</u>
1g	ea	VHF Radio (Spec 11.0) -----	<u>\$3,350.00</u>
1h	ea	Training (Spec 12.0) -----	<u>\$2,000.00</u>
1i	set	Publications (Spec 13.8) -----	<u>\$900.00</u>
1j	set	Inspection - Prior to shipment to final destination --- (Spec 13.10)	<u>\$3,000.00</u>

LOT 1 TOTAL (Includes Items 1a through 1j) \$306,495.00

NOTE: Final shipment to in-service locations as annotated on the Purchase or Delivery Orders will be arranged and pre-paid by the contractor. The actual cost will be invoiced as a separate line item on the invoice for full reimbursement by the State. Shipping arrangements will always be in the best interest of the State and any extraordinary costs or circumstances pre-approved by the Contracting Officer prior to shipment.

Required Delivery: **Not later than 180 days ARO** unless barge schedules prevent such delivery.

Offered Delivered Time: **180** Days ARO.

Per Section II – Special Terms and Conditions, paragraph 5.1.1.

Travel Labor Charge: ----- **\$92.00** Per Hour

Mileage Charge: ----- **\$2.40** Per Mile

Pricing when BRIDGESTONE tires are supplied:

1k set Tire Studs (Spec 3.6.5) ----- **\$1,595.00**

LOT #2

Item #	Unit	Description	Total \$ Amount
2a	ea.	Motor Grader, minimum 37,700 pound ----- operating weight with 14 foot moldboard, Color to be manufacturer's standard yellow. warranty as per Section III – Special Terms and Conditions. Per specification #353-AIP , contained herein. State Class #353 Motor Grader Year, Make & Model Offered: <u>2008 CATERPILLAR 16M</u>	<u>\$249,500.00</u>
2b	set	Emergency Steering (Spec 3.3.3) -----	<u>NO CHARGE</u>
2c	set	Push Block (Spec 10.1) -----	<u>\$2,500.00</u>
2d	set	Scarifier (Spec 10.2) -----	<u>\$9,345.00</u>
2e	ea	State Class #856-12 Snow Wing (Spec 10.3) ----- Make & Model Offered: <u>HENKE AHW-12</u>	<u>\$17,500.00</u>
2f	ea	State Class #866 Multi-Directional H-D Plow ----- (Spec 10.4) Make & Model Offered: <u>HENKE BLG –XH LIFT w/FV-12 PLOW</u>	<u>\$27,350.00</u>
2g	ea	VHF Radio (Spec 11.0) -----	<u>\$3,350.00</u>
2h	ea	Training (Spec 12.0) -----	<u>\$2,000.00</u>
2i	set	Publications (Spec 13.8) -----	<u>\$900.00</u>
2j	set	Inspection - Prior to shipment to final destination -- (Spec 13.10)	<u>\$3,000.00</u>

LOT 2 TOTAL (Includes Items 2a through 2j) \$621,990.00

NOTE: Final shipment to in-service locations as annotated on the Purchase or Delivery Orders will be arranged and pre-paid by the contractor. The actual cost will be invoiced as a separate line item on the invoice for full reimbursement by the State. Shipping arrangements will always be in the best interest of the State and any extraordinary costs or circumstances pre-approved by the Contracting Officer prior to shipment.

Required Delivery: **Not later than 180 days ARO** unless barge schedules prevent such delivery.

Offered Delivered Time: **180** Days ARO.

Per Section II – Special Terms and Conditions, paragraph 5.1.1.

Travel Labor Charge: ----- **\$92.00** Per Hour

Mileage Charge: ----- **\$2.40** Per Mile

Pricing when BRIDGESTONE tires are being supplied:

2k set Tire Studs (Spec 3.6.5) ----- **\$1,595.00**

SECTION V – SPECIFICATION

LOT 1: SPECIFICATION #352-AIP Motor Grader Minimum 35,000 Pound Operating Weight May 15, 2008

GENERAL SPECIFICATION:

It is the purpose of this specification to describe a new, and of the manufacturer's latest current model and design, minimum 35,000 pound operating weight (as described herein), diesel powered motor grader with tandem drive, scarifier, and 14 foot blade.

Unit shall include all standard equipment and accessories as advertised in manufacturer's specification sheet of model offered, unless otherwise specified herein.

Unit must meet Buy America requirements as per Section III – Special Terms and conditions.

APPLICATION:

Primary application is for high-speed snow removal. Secondary application will be for general purpose grading.

Grader will experience occasional high impact and shock loading. Grader will be subject to varying weather conditions from minus 50 degrees to plus 110 degrees, Fahrenheit.

DOCUMENTATION REQUIRED:

A basic manufacturer's product brochure describing the grader provided.

TYPICAL UNIT:

CATERPILLAR Model 140M-VHP or *KOMATSU* Model GD655-3 or *VOLVO* Model 940.
Provided all of the following minimum specifications are met.

1.0 POWER TRAIN:

1.1 Engine:

- 1.1.1 Diesel, water cooled, four (4) cycle, six (6) cylinder.
- 1.1.2 Horse Power: Developing a minimum, in forward gears, four (4) and up, 195 net SAE-J1349 flywheel HP at manufacturer's rated engine RPM.
- 1.1.3 Peak Torque: Minimum 719 pound foot.
- 1.1.4 Displacement: Minimum 7.2 liter.
- 1.1.5 Engine must meet current EPA requirements at time of delivery.

- 1.2 Exhaust System:
 - 1.2.1 Exhaust pipe with curved elbow design.
 - 1.2.2 Horizontal or vertical mounted muffler shall not extend more than 24 inches above hood or impair operator's vision to the rear.
- 1.3 Air Intake System:
 - 1.3.1 Two (2) stage air cleaner, dual element type.
 - 1.3.2 Air filter restriction indicator, in cab, in plain view of operator.
 - 1.3.3 Pre-cleaner: *CATERPILLAR* Dust Ejector, *ENGINAIR*, or *TURBO II* or *VOLVO* Exhaust Aspirator.
- 1.4 Cooling System:
 - 1.4.1 Winterfront:
 - 1.4.1.1 If required to maintain engine operating temperature at a minimum of 140 degrees Fahrenheit while operating to minus 50 degrees.
 - 1.4.1.2 To be a heavy-duty vinyl construction, with stainless steel snaps or swivel locks and include a heavy-duty zipper. Installed over the rear grill area.
 - 1.4.2 Anti-freeze: Permanent type, affording protection to minus 50 degrees Fahrenheit. Shall be *DELO* extended life coolant (red), or compatible.
 - 1.4.3 To include in-line valves, for inlet and outlet lines, connecting the cab heater to engine. Valves to be located as close to heater as possible providing minimum coolant loss when servicing heaters.
- 1.5 Fuel System: Fuel tank capacity capable of operating ten (10) hours under full load while plowing snow.
- 1.6 Accelerator/Decelerator: A foot-operated unit overriding the friction lever (or electronic) type hand throttle is required.
- 1.7 Starting Aids:
 - 1.7.1 Automatic ether system or glow plugs or grid heater.
 - 1.7.1.1 IE automatic ether injection system, to be wired through the starter button, include engine temperature sensor switch, and be installed in the engine compartment and have maximum protection from the elements.
 - 1.7.2 Engine Block Heater: Immersion type, highest wattage available, 110 volt AC (OEM if available). Tank type heater is not acceptable.
 - 1.7.3 Silicone Pad Heaters:
 - 1.7.3.1 To be 300 watt (each), 110 volt AC.
 - 1.7.3.2 One (1) each, bonded to transmission oil pan.
 - 1.7.3.3 One (1) each, bonded to engine oil pan.

- 1.7.3.4 One (1) each, bonded to the hydraulic oil tank.
- 1.7.3.5 All three (3) of these heaters can be together in one (1) plug.
- 1.7.4 Battery Trickle Charger:
 - 1.7.4.1 To be *MIDTRONICS* Model MBC-24-5, fully automatic, 5 amp, 110-volt.
 - 1.7.4.2 To be mounted in the engine compartment, functional with the electrical Master Switch in the "OFF" position.
- 1.7.5 110-volt AC power cords for engine heaters, transmission heater, hydraulic oil tank and battery charger to be plugged into waterproof, 20 amp, 110 volt AC, junction box equipped with four (4) each amp rated receptacles. Electrical cord, 20-amp, male plug portion of 20 amp cord with 20 amp weather resistant plug to run out to the rear of the unit for easy access by ground personnel.
 - 1.7.5.1 Cords being plugged into the junction box are to be labeled (permanent label, not a *DYMO* type) as to what they are for, such as; "Engine Block Heater", "Heaters: Transmission Oil, Engine Oil, Hydraulic Oil" and "Battery Charger". The 20 amp cord is to extend approximately six (6) inches and be securely fastened.
 - 1.7.5.2 The location of the cord(s) outlet box(es) is/are to be in a weather protected area in the engine compartment.
 - 1.7.5.3 All wiring to be adequately secured and protected in a loom or similar protection.

2.0 DRIVE TRAIN:

- 2.1 Transmission:
 - 2.1.1 To be sequential, direct drive or power shift.
 - 2.1.2 Minimum six (6) speeds forward, three (3) reverse.
 - 2.1.3 Travel speeds at rated RPM in top gear (with 14.00x24 specified tires):
 - 2.1.3.1 Forward speed, minimum 25 MPH.
 - 2.1.3.2 Reverse speed, minimum 14.5 MPH.
 - 2.1.4 To include foot-operated transmission disconnect on-off valve in cab, easily accessible to operator. Foot pedal is to provide inching capabilities for "close-quarters" maneuvering.
 - 2.1.5 Transmission to have replaceable filter element or *CATERPILLAR* removable magnetic filter.
 - 2.1.6 Guard: If transmission is unprotected in the front, to include bolt-on and hinged type transmission guard.
- 2.2 Final Drive: Equipped with *TRACTECH* No-SPIN or driver controlled differential lock and unlock.

3.0 CHASSIS:

- 3.1 Operating Weight:
 - 3.1.1 Total grader operating weight to be a minimum 35,000 pounds.
 - 3.1.2 Total minimum operating weight may include lubricants, coolant, full fuel tank(s), operator (175 lbs.), 14 foot moldboard with hydraulic tilt and side shift, forward scarifier, full height ROPS cab, specified wheel and tire size and engine compartment doors in addition to other specified accessories and options. Items not to be included in this weight requirement are; wheel weights, weight filled tires, spare tire(s) with wheel(s), push block/plate, front mounted plow, or snow wing, assemblies.
- 3.2 Frame: Articulated with articulation between 20 and 22 degrees, left and right.
- 3.3 Steering:
 - 3.3.1 Full power assist.
 - 3.3.2 Turning Radius (outside front tire - using front wheel steering, frame articulation, and with differential unlocked): 26 feet maximum.
 - 3.3.3 **Supplemental Emergency Power Steering: (OPTIONAL ITEM – Refer to Section III - Price Schedule)**
 - 3.3.3.1 To include emergency power assist for steering during engine power loss.
- 3.4 Front Axle:
 - 3.4.1 Wheel Lean: 17.5 degrees left and 17.5 degrees right, minimum.
 - 3.4.2 Axle Oscillation: 16 degrees up and 16 degrees down, minimum.
 - 3.4.3 Axle Ground Clearance: 23 inches minimum.
 - 3.4.4 To be equipped with thermal relief valve in leaning wheel circuit.
- 3.5 Brakes (Three independent systems required):
 - 3.5.1 Service brakes: To be wet (oil) disc, adjustment free, foot operated, power boosted, air or hydraulic providing braking of rear tandem wheels.
 - 3.5.2 Secondary (backup) braking system:
 - 3.5.2.1 Dual circuit system with an individual circuit to each tandem to provide backup braking in the event of loss of service brake capacity.
 - 3.5.2.2 In the event that only one (1) circuit is operational, the machine will still have sufficient braking capacity for emergency stops.
 - 3.5.3 Parking brake: Hand operated parking brake independent of other braking systems, capable of holding machine on 20 percent grade.
 - 3.5.4 All brake lines within 24 inches of the tires will have heavy duty brake line covers to prevent damage from tire chains.

- 3.5.5 Air Dryer:
 - 3.5.5.1 To be included on systems with air brakes.
 - 3.5.5.2 To be mounted where easily accessible for servicing.
- 3.6 Tires and Wheels:
 - 3.6.1 Seven (7) tires, including spare, shall be *BRIDGESTONE* Model VSW V-Steel Snow Wedge or *GOODYEAR* Model AS-3A(G-3) or *MICHELIN* Model SXNOPLUS M&S, 14.00R24, radial, on demountable rims. The front and rear tires shall be of the same size.
 - 3.6.1.1 ***NOTE: All subsequent tire substitutions, due only to non-availability of the above tires, must be approved by the Contracting Office prior to shipment. The request must include the make, size and tread pattern for approval.***
 - 3.6.2 The front and rear wheels shall be interchangeable.
 - 3.6.3 To include spare wheel and mounted tire, shipped loose.
 - 3.6.4 Wheels to have 10-inch minimum rim width and be three (3) piece.
 - 3.6.5 Tire Studs for *BRIDGESTONE*. (**OPTIONAL ITEM – Refer to Section III-Price Schedule**)
 - 3.6.5.1 Carbide impregnated, carbide embedded, #19, ¼ (0.25) inch diameter shank.
 - 3.6.5.2 *BRIDGESTONE* tires to have every lug in the second row from each outer edge (both sides of tire) studded.
- 3.7 Tire Chain Clearance:
 - 3.7.1 Motor grader is not to have any fixture or lines within 24 inches of any tire (level ground) and not protected, such as brake, air, hydraulic, or electrical, which may be damaged because of a broken chain link.
- 3.8 Tire Chains:
 - 3.8.1 To include six (6) each *PEERLESS* Model 2615.
 - 3.8.2 To include appropriate heavy-duty chain repair tool bar.
- 3.9 Hitch: Each unit to be equipped with rear pin type tow hitch of sufficient strength to tow unit.

4.0 ELECTRICAL:

- 4.1 24-volt system.
- 4.2 Alternator: Minimum amperage of 115 percent of total draw of all electrical components including VHF radio and optional lighting.
- 4.3 Batteries: Minimum total CCA of 1800 at minus 20 degrees Fahrenheit.

- 4.4 Battery Box:
 - 4.4.1 Shall be metal with metal cover (or inside the engine compartment) with hold-downs for batteries.
 - 4.4.2 Constructed and located in such a manner to minimize damage from obstacles such as broken chain links, mud, and snow while grader is in operation, and in such a manner that cover may be lifted and batteries removed without obstruction.
- 4.5 Master Switch:
 - 4.5.1 Single high-ampere, wired in ground loop to cut off power source from battery to ground and remainder of electrical system. To be *POLLACK* Model 51-904 with 51-303 face plate or *COLE HERSEE* #284-02 or *CATERPILLAR* equivalent.
 - 4.5.2 Located where accessible but not ordinarily visible to persons unfamiliar with machine.
- 4.6 Jump Starting Hookup:
 - 4.6.1 To make jump starting less time consuming and safer, the following is to be provided.
 - 4.6.2 Two (2) each panel mounted receptacles (utilizing a panel mount plate) are to be mounted through the engine cowling near the batteries and hooked to the batteries with minimum 2/0 battery cable.
 - 4.6.3 The mounting plate shall be clearly marked for polarity. The mounting plate shall include heavy-duty identification plates(s) with a minimum size of 4x4 inches for both the positive and negative receptacles. The plates shall include the appropriate "+" or "-" sign, the appropriate "12 VOLTS" or "24 VOLTS" and be appropriately colored as red for positive and black for negative.
- 4.7 Toggle switches controlling electrical components to be metal (plastic rocker type switches are acceptable).
- 4.8 All wiring to be enclosed in non-metallic weatherproof loom.
- 4.9 Lighting:
 - 4.9.1 Headlights: To be halogen, two (2) each total.
 - 4.9.1.1 Note: When equipped with a front mounted multi-directional plow, the halogen headlights located over front wheels are to be high enough to shine over the plow when plow is raised all the way up.
 - 4.9.2 Work Lights:
 - 4.9.2.1 To be halogen, swivel type, flood, 35-watt minimum.
 - 4.9.2.2 Six (6) each total; two (2) mounted above blade circle, two (2) blade lights on bottom front of cab, and minimum two (2) rear flood lights (swivel type) mounted near the top rear of engine compartment.

- 4.9.2.3 Graders with snow wing attachment shall have minimum of one (1) additional light mounted on top right side of cab.
- 4.9.3 Refer to drawing (State Drawing #3B, dated 2/08/95) showing approximate headlight and work light mounting locations located at the end of the bid package:
- 4.9.4 Tail lights, back-up lights, brake lights, front and rear turn signals with emergency hazard circuit and instrument lighting to be included.
- 4.9.5 Strobe Lights:
 - 4.9.5.1 Two (2) each *WHELEN* LED L31 Series strobe lights, synchronized.
 - 4.9.5.2 Left strobe lens (*WHELEN* Model L31HAF4) to be amber.
 - 4.9.5.3 Right strobe lens (*WHELEN* Model L31HBF4) to be blue.
 - 4.9.5.4 To include "On/Off" switch.
 - 4.9.5.5 To include "auto intensity" sensor.
 - 4.9.5.6 Location: On top of the cab, visible from all directions
 - 4.9.5.7 *WHELEN* sales representative:
 - 4.9.5.7.1 Kent Bruce
 - 4.9.5.7.2 Cell Phone: (206) 510-2060
 - 4.9.5.7.3 Email: kdbco@comcast.net
- 4.9.6 All lighting to conform to DOT federal regulations.

5.0 CAB:

- 5.1 EROPS (Enclosed Roll Over Protection System):
 - 5.1.1 OEM, fully enclosed, steel, full height, fully insulated, sound suppressed, pressurized, meeting ROPS standards with shatterproof glass (laminated grade) in windshield. To have lockable doors.
 - 5.1.2 Heater(s):
 - 5.1.2.1 OEM heater to be minimum 40,000 BTU, hot water type, dual-fan configuration, independently switched, with high/low switch.
 - 5.1.2.2 Air intake for heater to be filtered and drawn in from top of cab. If secondary heater's air is drawn from outside, it too shall be filtered.
 - 5.1.3 Defroster Fan(s):
 - 5.1.3.1 To be included, unless OEM heater defrosters are capable of keeping windows fog free at all ambient operating temperatures.
 - 5.1.3.2 To be caged, two (2) speeds, separately switched.
 - 5.1.3.3 May be located in left and/or right upper rear corner and/or upper right front corner of the cab.

- 5.1.4 Air Conditioning: OEM Standard.
- 5.1.5 Window Wipers and Washers:
 - 5.1.5.1 Power operated, front and rear, plus front lower window wipers and washers.
 - 5.1.5.2 To include OEM minimum two (2) speed controls for upper front and rear wipers.
- 5.1.6 Seat: Suspension type, cloth, shall be fully adjustable with tilt-up armrests. Vinyl covering is not acceptable.
- 5.1.7 Seat belt included to conform to SAE-386 JUN85.
- 5.1.8 All operating controls including power control levers shall be located in such a position as to be within easy reach of the operator.
- 5.1.9 To include fully adjustable control console and steering wheel or joystick steering.
- 5.1.10 Visibility must be such that the operator can clearly observe his work from sitting position, to both sides, as well as front and rear.
- 5.1.11 Panoramic convex mirror, minimum of 50 square inches, mounted inside cab in upper front.
- 5.1.12 Outside rear view mirrors, two (2) each, *WEST COAST* type, heated (to include on/off switch), corrosion proof, minimum 88 square inches, mounted front left and right corners.
- 5.1.13 To include an OEM weather resistant toolbox mounted in an accessible location. Cab mounted is not acceptable.

6.0 INSTRUMENTATION:

- 6.1 All gauges as noted below shall read in U.S. units of measure (not metric) at time of delivery.
- 6.2 All gauges and indicators are to be in plain view of operator and include as a minimum:
 - 6.2.1 OEM's electronic monitoring system(s).
 - 6.2.2 Tachometer.
 - 6.2.3 Engine Coolant:
 - 6.2.3.1 High temperature (to include visual warning system).
 - 6.2.3.2 Low level (to include visual warning system).
 - 6.2.4 Engine oil pressure (to include visual warning system).
 - 6.2.5 Ammeter or voltmeter gauge, or indicator light.
 - 6.2.6 Hour meter, mounted in cab, running engine activated.
 - 6.2.7 Fuel level gauge.
 - 6.2.8 Air pressure (if air system equipped, to include audio and visual warning system).

6.2.9 Transmission temperature.

6.2.10 Parking brake "ON" indicator light (flashing type or light and buzzer).

7.0 HYDRAULIC SYSTEM:

- 7.1 Power Control: To be direct acting hydraulic, with suitable hand operated control levers. Operating control system shall be designed to withstand the maximum stress imposed on it. Any ball joints and split bearings shall be provided with adequate means of taking up wear.
- 7.2 Pump:
 - 7.2.1 To be closed center variable pressure type displacement piston pump, developing pressures not greater than 3,500 PSI.
 - 7.2.2 To include hydraulic bypass for cold starting, or no load system.
- 7.3 To include canister or spin-on type hydraulic oil filter, minimum 10 micron or *CATERPILLAR* 20 micron in the tank filter. Servicing of filter to be accomplished without having to drain oil from the tank or excessive loss of oil.
- 7.4 Hydraulic tank to have easy access to fill cap and level indicator.
- 7.5 Lift Circuit:
 - 7.5.1 Designed to provide system relief from shock loading.
 - 7.5.2 Blade lift accumulators are required.
- 7.6 Shock Load Protection: To include a pressure relief system to reduce shock loading and minimize impact damage to the circle and moldboard systems. Can be by the use of a slip clutch, accumulator, relief valve or other appropriate mechanism(s) or design. Relief setting(s) to be approximately 500 PSI above system working pressure.
- 7.7 Antidrift Mechanism: System shall include hydraulic or pilot operated antidrift check valves or similar arrangement to minimize cylinder drift on blade lift, tilt, circle shift, articulation, and wheel lean.
- 7.8 Moldboard Float:
 - 7.8.1 To include cab controlled hydraulic moldboard float valves (each side to be separately controlled), with electrical or mechanical control, controlling moldboard in float position.
 - 7.8.2 To further provide controlled bypass for hydraulic fluid to lift cylinders, permitting moldboard to raise and lower automatically in snow and ice removal operations.
- 7.9 **Rear Hydraulics:**
 - 7.9.1 To include six (6) in-cab control and hydraulic lines to the front and the rear of the unit for ordered or future attachments. Lines are to be capped off when not utilized.
- 7.10 Thermo relief's to be in all blade and attachment lift hydraulic circuits to protect circuits from expansion due to temperature changes.

7.11 Hydraulic hoses or valves in the operator's cab are not acceptable.

7.12 Hydraulic hoses, at articulation points are to be armor wrapped.

8.0 BLADE ASSEMBLY:

8.1 Moldboard:

8.1.1 Length: 14 feet. Blade extension(s) are not acceptable.

8.1.2 Minimum of 24 inches in height and minimum of 7/8 (0.875) inch thick. Height measurement is to be taken on outside of moldboard curvature (dimension does not include cutting edge).

8.1.3 Hydraulic side shift and hydraulic tilt to be included.

8.1.3.1 Note: Moldboard side shift cylinder to be mounted as to expose the cylinder ram on the left side (street-side) of unit to prevent cylinder ram damage from right side (curb-side) mounted wing mast.

8.1.4 The moldboard is to be constructed of high carbon steel, securely mounted to prevent displacement or chattering in any position and shall be designed to give a rolling tumble to materials.

8.1.5 Cutting Edge:

8.1.5.1 In lieu of standard cutting edge, to be equipped with replaceable bolt-on *KENNEMETAL* Dual-Carbide-Insert, or *BLACK CAT* Dual Carbide Blades, or equivalent, cutting edge with 3/4 (0.75) inch diameter grade eight (8) plow bolts and nuts on six (6) inch centers, and end bits of alloy or high carbon steel.

8.1.5.2 The main body of the cutting edge blade to be minimum 7/8 (0.875) inch thick.

8.1.5.2.1 Inserts to reduce to 5/8 inch are to be provided (shipped loose).

8.1.6 End Bits:

8.1.6.1 To be hardened, minimum 5/8 (0.625) inch thick with 3/4 (0.75) inch diameter grade eight (8) plow bolts and nuts.

8.1.6.1.1 Inserts to reduce to 5/8 inch are to be provided (shipped loose).

8.2 Moldboard Range:

8.2.1 Reach of specified 14-foot moldboard beyond outer edge of tires on both left and right side, to average minimum 76 inches.

8.2.2 Moldboard slide both left and right, to average minimum 23 inches.

8.2.3 Circle side shift both left and right, to average minimum 24 inches.

8.2.4 Blade tilt forward minimum 40 degrees, tilt back minimum five (5) degrees.

- 8.2.5 High Lift: For bank sloping angle to the right and to the left, 90 degrees minimum.
- 8.2.6 Moldboard (not cutting edge) ground clearance with blade centered not less than 17½ (17.5) inches.
- 8.2.7 Full hydraulic (manual adjustments not acceptable).
- 8.2.8 Blade down pressure (static force which may be applied by the moldboard), 19,000 pounds minimum. To be obtained by having the moldboard tilted all the way forward and 90 degrees to the grader. A push block or front mounted dozer blade assembly will not be allowed to obtain minimum down pressure.
 - 8.2.8.1 Since some of the units being purchased without the scarifier, as noted in item 10.2, only a scarifier equipped unit will be required to meet the 19,000 pound requirement.

9.0 CIRCLE ASSEMBLY:

- 9.1 Machine shall be equipped with a full circle drawbar suspension and a provision to adjust for wear.
- 9.2 The circle rotation shall operate through 360 degrees. The circle power shall be sufficient to permit blade rotation under full blade load (material to be gravel).
- 9.3 Circle drive system to have a relief mechanism to guard against damage caused by sudden impacts or shock loading at high speeds.
- 9.4 Circle turn to be hydraulic motor gearbox type system. (Added per Amendment #3)

10.0 ATTACHMENTS:

- 10.1 **Push Block:** (OPTIONAL ITEM – Refer to Section III - Price Schedule)
 - 10.1.1 **A push block is required to be ordered on all units not equipped with a front mounted State Class #866 Multi-Directional Plow)**
 - 10.1.2 To be an OEM front mounted push block, bolt-on.
- 10.2 **Scarifier:** (OPTIONAL ITEM – Refer to Section III – Price Schedule)
 - 10.2.1 Shall be equipped with scarifier assembly, mounted between the moldboard and the front wheels, providing a cut of minimum 46 inches wide. To have a minimum of eleven (11) slots with removable shanks and replaceable points.
 - 10.2.2 Electric over hydraulic controls are acceptable.
 - 10.2.3 Scarifier is to be so designed and located so that it remains functional when a class #866 multi-directional plow and a class #856 Snow Wing are mounted and being used.

- 10.3 **Snow Wing (State Class #856-12'): (OPTIONAL ITEM – Refer to Section III - Price Schedule)**
- 10.3.1 Installed right-hand rear mounted 12 foot snow wing. To be *CATERPILLAR* Work Tool by Weldco-Beales or *HENKE* Model AWH-12 or *RYLIND* Model RW-12H or *VOLVO* or *WELDCO-BEALES*, provided the following specifications are met.
 - 10.3.2 Controls: When available, the controls are to be on the right hand bank. The benching control may be located to the left of the operator.
 - 10.3.3 Front wing mast to be mounted such that the motor grader can:
 - 10.3.3.1 Utilize optimum moldboard angle (minimum 40 degrees for both moldboards), operator visibility, and tire chain clearance.
 - 10.3.3.2 Provide moldboard inboard and outboard float system.
 - 10.3.4 Direct hydraulic wing with hydraulic rear brace height adjustment (cable design is not acceptable).
 - 10.3.5 To include compression spring and shear pin in rear strut.
 - 10.3.6 All hydraulic cylinders to be dual action type.
 - 10.3.7 All hydraulic lines and control valves to be of sufficient size to optimize hydraulic response in cold weather operations.
 - 10.3.8 Moldboard to be smooth rolled and designed to maximize rolling action of the snow.
 - 10.3.9 Moldboard Thickness: Minimum 3/16" (0.1875 inch).
 - 10.3.10 Moldboard Dimensions:
 - 10.3.10.1 Nose Height: Minimum 28 inches. Measurement is to be taken on outside of moldboard curvature and is not to include cutting edge height to moldboard.
 - 10.3.10.2 Discharge Height: Minimum 42 inch. Measurement is to be taken on outside of moldboard curvature and is not to include cutting edge height to moldboard.
 - 10.3.10.3 Benching Height: Minimum 60 inch (vertical distance).
 - 10.3.10.4 Cutting Edge Length: Minimum 12 foot.
 - 10.3.11 Cutting Edge:
 - 10.3.11.1 In lieu of standard cutting edge, to be equipped with replaceable bolt-on *KENNEMETAL* Dual-Carbide-Insert, or equivalent, cutting edge with minimum 5/8 (0.625) inch diameter grade eight (8) plow bolts and nuts on six (6) inch centers.
 - 10.3.11.2 The main body of the cutting edge blade to be minimum 7/8 (0.875) inch thick.
 - 10.3.12 End bits to be of alloy or high carbon steel and include 5/8 (0.625) inch diameter grade eight (8) plow bolts and nuts.

10.4 **Multi-Directional Heavy-Duty Plow (State Class #866): (OPTIONAL ITEM – Refer to Section III - Price Schedule)**

- 10.4.1 To be front mounted with full hydraulic controls. To be *CATERPILLAR* Work Tool by *Weldco-Beales* or *HENKE* or *RYLIND* or *WELDCO-BEALES*, provided all of the following specifications are met.
- 10.4.2 To include adjustable and replaceable mushroom design shoes.
- 10.4.3 Blade angle cylinders to include accumulator system or hydraulic cross-over relief(s).
- 10.4.4 Clearing width, minimum 133 inches, in bulldozer position.
- 10.4.5 Center blade height, minimum 40 inches.
- 10.4.6 Tip blade height, minimum 46 inches.
- 10.4.7 Center Cutting Edge(s):
 - 10.4.7.1 In lieu of standard cutting edge, to be equipped with replaceable bolt-on *KENNEMETAL* Dual-Carbide-Insert, or equivalent, cutting edge with 5/8 (0.625) inch diameter grade eight (8) plow bolts and nuts on six (6) inch centers.
 - 10.4.7.2 The main body of the cutting edge blade to be minimum 7/8 (0.875) inch thick.
 - 10.4.7.3 To include AASHTO punching including 5/8 (0.625) inch punching on three (3) three (3) six (6) six (6) - - - - six (6) six (6) three (3) three (3) inch centers.
 - 10.4.7.3.1 Example for eight (8) foot moldboard:
 - 10.4.7.3.2 3-3-6-6-6-6-6-6-6-6-6-6-6-6-6-3-3
- 10.4.8 To include valves, controls and lines necessary for installation and full operation.
 - 10.4.8.1 Lift circuit to include detented valve for float position.
- 10.4.9 Hydraulic lines must be secured and wrapped in wear areas to prevent chaffing.
- 10.4.10 To be equipped with mechanical quick disconnect allowing easy removal of the plow assembly without having to remove pins. The hydraulic lines are to include quick connect fittings with chained caps at the grader end (hoses to stay with plow).

11.0 VHF RADIO: (OPTIONAL ITEM– Refer to Section III - Price Schedule)

- 11.1 Mobile: *ICOM* Model IC-A110 Version 5 VHF (AM) aeronautical band, complete with noise canceling microphone, external speaker, external transmit/receive antenna mounted on cab, and to include frequency(s) as listed on the State's Purchase Order.
- 11.2 Installation:
 - 11.2.1 Speaker shall be mounted in cab so the operator can hear with engine running at full power.
 - 11.2.2 Main unit to be shock mounted.
 - 11.2.3 Installation to be performed by holder of a current FCC Radio Telephone license (copy of certification to be provided with delivery of unit).
- 11.3 Headset:
 - 11.3.1 Listen only headset, *PELTOR* Model 7050 or Model HTM7A-02.
 - 11.3.2 When requested, the VHF radio must be equipped with an easy accessed and labeled, headset jack. The speaker(s) described above would still be required so that unit could be used with or without the listen only headset.

12.0 TRAINING: (OPTIONAL ITEM – Refer to Section III - Price Schedule)

- 12.1 Total of 16 hours at State Equipment Fleet Maintenance Facilities located in **ANCHORAGE**.
- 12.2 Contractor to provide a qualified factory trained instructor(s), within 30 days of acceptance by the State. Please give advance notice to the District Equipment Manager.
- 12.3 To include a minimum of eight (8) hours of operator training including the following, as a minimum applicable agenda:
 - 12.3.1 Operating procedures per operating manual.
 - 12.3.2 Break-in procedures.
 - 12.3.3 Equipment limitations.
 - 12.3.4 Operator maintenance.
 - 12.3.5 Before operations checks and lubrication.
 - 12.3.6 Safety.
 - 12.3.7 Cold weather operations.
 - 12.3.8 Jump starting.
 - 12.3.9 Welding on equipment.
 - 12.3.10 Towing or transporting equipment.
 - 12.3.11 Instruments and controls.
 - 12.3.12 Gauge interpretation.
 - 12.3.13 Equipment operation, Do's and Don'ts.

- 12.3.14 Attachment operation, Do's and Don'ts.
- 12.4 To include a minimum of eight (8) hours of mechanics (Journeyman level) training including the following theory, trouble shooting, and test procedures for, as a minimum applicable agenda:
 - 12.4.1 Electronics.
 - 12.4.2 Electrical.
 - 12.4.3 Hydraulics.
 - 12.4.4 Air system.
 - 12.4.5 Drive train.
 - 12.4.6 Engine and transmission electronics.

13.0 MISCELLANEOUS:

- 13.1 Weight Scale Ticket:
 - 13.1.1 Required not later than time of delivery.
 - 13.1.2 To include all items, as ordered, but without operator
 - 13.1.3 Also refer to Section III – Special Terms and Conditions, paragraph 9.0.
- 13.2 Hydraulic Hoses: All hydraulic hoses are to be Arctic Grade to minus 40 degrees Fahrenheit, minimum.
- 13.3 Special Lubricants: If, for warranty purposes, manufacturer's specific lubricants are required, vendor is to provide these lubricants, or provide, at time of delivery, a cross reference chart between manufacturer's lubricants and any name brand and readily available equivalents.
- 13.4 Vandalism Protection:
 - 13.4.1 Shall include locks for batteries, fuel tank, hydraulic tank, engine lube oil filler, and radiator.
 - 13.4.2 Locking panels for compartments are acceptable.
 - 13.4.3 If padlocks are utilized, they shall be keyed alike (OEM, meaning that one key will fit all loaders of the same make).
 - 13.4.4 Three (3) sets of keys, minimum, to be provided.
- 13.5 Backup Alarm: Electronic, self-adjusting sound level, *ACORN PRODUCTS* Model 1D-112AA, *ECCO* Models S901 or SA914 or SA917, *PRECO* Model Preco-Matic 1040, *STAR* Model Starmatic 63-000, *TARGET TECH* Model 210504, *VELVAC* Model 697066 or *WARN* Model Reactor 2100504, located on rear of unit, as per manufacturer's recommendations.
- 13.6 Warranty: Five (5) year two (2) part warranty at assigned location, per Section III - Special Terms and Conditions.
- 13.7 Paint: Manufacturer's standard yellow.
- 13.8 **Publications:** **(OPTIONAL ITEM– Refer to Section III - Price Schedule)**

- 13.8.1 To include parts, service, and operator's manuals, per Section III - Special Terms and Conditions, paragraph 7.0.
- 13.9 Delivery Reminder: The State does not take delivery until the unit is complete, meeting all required specifications, and is assembled (by the contractor or the contractor's subcontractor).
- 13.10 **Final Inspections: (OPTIONAL ITEM – Refer to Section III- Price Schedule)**
- 13.10.1 Prior to shipment to final destination, **a completed unit**, component equipment, and accessories shall be inspected and/or tested by the contractor for compliance with specifications. This inspection must be completed prior to arrival of the State inspection team.
- 13.10.2 The contractor shall provide full access to the State inspection team.
- 13.10.3 These inspections by the State shall be thorough and very critical, and will encompass a complete review of the specifications. Adequate time and technical personnel shall be made available to assist the State in these inspections.
- 13.10.4 Inspection trip costs. The contractor will supply round trip coach ("Y") airfare (not supersaver), with open arrival and departure times, for two (2) inspectors to the contractor's point of final assembly. Both inspectors will depart from **ANCHORAGE**. If the unit is coming through Anchorage, the inspection could be held at the vendor's Anchorage facility.
- 13.10.4.1 Per diem for each of the two (2) inspectors shall be at a rate of \$150.00 per day each. Out of state would require 3-days (travel day, inspection day, and travel day). Per diem checks will be issued (prior to travel) to the individual traveler, not to the State of Alaska.
- 13.10.4.2 The successful vendor shall assist by booking lodging reservations. Meals and lodging will be paid by the State inspectors.
- 13.10.4.3 All ground transportation necessary to conduct the inspection including one (1) full size vehicle (Chevy Impala, Ford Taurus, or equivalent), for the State inspection team.
- 13.10.4.4 While the State recognizes contractual responsibility in testing, the State reserves the exclusive right to reduce the number of inspectors when and if that action seems prudent. If the number of inspectors is reduced, the Contractor will return to the State all monies saved by that action within thirty (30) days following the actual inspection.

- 13.10.5 It shall be the responsibility of the State inspection team to technically inspect and test the unit for compliance with the specifications.
- 13.10.6 It shall be the responsibility of the Contracting Authority Representative to observe the inspection and test to assure compliance with the published terms, conditions, and specifications of the contract, and to mediate any disputes, which may arise between the contractor and the Department of Transportation's representatives.
- 13.10.7 FINAL ACCEPTANCE REMINDER: Final acceptance is at final destination; however, all major tests will be conducted at the contractor's place of business unless the State has reason to believe alterations or damages have taken place which may have changed the performance or design characteristics of the unit since the time of inspection at the contractor's location.
- 13.11 A final inspection of the unit will be conducted at FOB point to assure that the unit still meets specifications.

END OF SPECIFICATION #352-AIP

SECTION IV- SPECIFICATIONS

LOT 2: SPECIFICATION #353-AIP

Motor Grader

Minimum 37,700 Pound Operating Weight

May 15, 2008

GENERAL SPECIFICATION:

It is the purpose of this specification to describe a new, and of the manufacturer's latest current model and design, minimum 37,700 pound operating weight (as described herein), diesel powered motor grader.

Unit shall include all standard equipment and accessories as advertised in manufacturer's specification sheet of model offered, unless otherwise specified herein.

Unit must meet Buy America requirements as per Section III – Special Terms and conditions.

APPLICATION:

Primary application is for high-speed snow removal. Secondary application will be for general purpose grading.

Grader will experience occasional high impact and shock loading. Grader will be subject to varying weather conditions from minus 50 degrees to plus 110 degrees, Fahrenheit.

DOCUMENTATION REQUIRED:

A basic manufacturer's product brochure describing the grader provided.

TYPICAL UNIT:

CATERPILLAR Model 160M-VHP or *JOHN DEERE* Model 872D or *KOMATSU* Model GD675-3 or *VOLVO* Model G960. Provided all of the following minimum specifications are met.

1.0 POWER TRAIN:

1.1 Engine:

- 1.1.1 Diesel, four (4) cycle, six (6) cylinder, turbocharged.
- 1.1.2 Horse Power: Developing a minimum, in forward gears, four (4) and up, 200 net SAE-J1349 flywheel HP at manufacturer's rated engine RPM.
- 1.1.3 Peak Torque: Minimum 719 pound foot, in fourth gear and up.
- 1.1.4 Displacement: Minimum 7.2 liter.
- 1.1.5 Wet sleeved cylinders.
- 1.1.6 Engine must meet current EPA requirements at time of delivery.

- 1.2 Exhaust System:
 - 1.2.1 Exhaust pipe with curved elbow design.
 - 1.2.2 Horizontal or vertical mounted muffler shall not extend more than 32 inches above hood or impair operator's vision to the rear.
- 1.3 Air Intake System:
 - 1.3.1 Two (2) stage air cleaner, dual element type.
 - 1.3.2 Air filter restriction indicator, in cab, in plain view of operator.
 - 1.3.3 Pre-cleaner: *CATERPILLAR* dust ejector, *ENGINAIR*, or *TURBO II* or *VOLVO* Exhaust Aspirator.
- 1.4 Cooling System:
 - 1.4.1 Winterfront:
 - 1.4.1.1 If required to maintain engine operating temperature at a minimum of 140 degrees Fahrenheit while operating to minus 50 degrees.
 - 1.4.1.2 To be a heavy-duty vinyl construction, with stainless steel snaps or swivel locks and include a heavy-duty zipper. Installed over the rear grill area.
 - 1.4.2 Anti-freeze: Permanent type, affording protection to minus 50 degrees Fahrenheit. Shall be *DELO* extended life coolant (red), or compatible.
 - 1.4.3 To include in-line valves, for inlet and outlet lines, connecting the cab heater to engine. Valves to be located as close to heater as possible providing minimum coolant loss when servicing heaters.
- 1.5 Fuel System: Fuel tank capacity capable of operating ten (10) hours under full load while plowing snow.
- 1.6 Accelerator/Decelerator: A foot-operated unit overriding the friction lever (or electronic) type hand throttle is required.
- 1.7 Starting Aids:
 - 1.7.1 Automatic ether system or glow plugs or grid heater.
 - 1.7.1.1 IF automatic ether injection system, to be wired through the starter button, include engine temperature sensor switch, and be installed in the engine compartment and have maximum protection from the elements.
 - 1.7.2 Engine Block Heater: Immersion type, highest wattage available, 110 volt AC (OEM if available). Tank type heater is not acceptable.
 - 1.7.3 Silicone Pad Heaters:
 - 1.7.3.1 To be 300 watt (each), 110 volt AC.
 - 1.7.3.2 One (1) each, bonded to transmission oil pan.
 - 1.7.3.3 One (1) each, bonded to engine oil pan.

- 1.7.3.4 One (1) each, bonded to the hydraulic oil tank.
- 1.7.3.5 All three (3) of these heaters can be together in one (1) plug.
- 1.7.4 Battery Trickle Charger:
 - 1.7.4.1 To be *MIDTRONICS* Model MBC-24-5, fully automatic, 5 amp, 110-volt.
 - 1.7.4.2 To be mounted in the engine compartment, functional with the electrical Master Switch in the "OFF" position.
- 1.7.5 110-volt AC power cords for engine heaters, transmission heater, hydraulic oil tank and battery charger to be plugged into waterproof, 20 amp, 110 volt AC, junction box equipped with four (4) each amp rated receptacles. Electrical cord, 20-amp, male plug portion of 20 amp cord with 20 amp weather resistant plug to run out to the rear of the unit for easy access by ground personnel.
 - 1.7.5.1 Cords being plugged into the junction box are to be labeled (permanent label, not a *DYMO* type) as to what they are for, such as; "Engine Block Heater", "Heaters: Transmission Oil, Engine Oil, Hydraulic Oil" and "Battery Charger". The 20 amp cord is to extend approximately six (6) inches and be securely fastened.
 - 1.7.5.2 The location of the cord(s) outlet box(es) is/are to be in a weather protected area in the engine compartment.
 - 1.7.5.3 All wiring to be adequately secured and protected in a loom or similar protection.

2.0 DRIVE TRAIN:

- 2.1 Transmission:
 - 2.1.1 To be sequential, direct drive, power shift.
 - 2.1.2 Minimum eight (8) speeds forward, four (4) speeds reverse.
 - 2.1.3 Travel speeds at rated RPM in top gear (with 14,00x24 specified tires).
 - 2.1.3.1 Forward speed, minimum 25 MPH.
 - 2.1.3.2 Reverse speed, minimum 19 MPH.
 - 2.1.4 To include foot-operated transmission disconnect on-off valve in cab, easily accessible to operator. Foot pedal is to provide inching capabilities for "close-quarters" maneuvering.
 - 2.1.5 Transmission to have replaceable filter element or *CATERPILLAR* removable magnetic filter.
 - 2.1.6 Guard: If transmission is unprotected in the front, to include bolt-on and hinged type transmission guard.
- 2.2 Final Drive: Equipped with *TRACTECH* No-SPIN or driver controlled differential lock and unlock.

3.0 CHASSIS:

3.1 Operating Weight:

- 3.1.1 Total grader-operating weight to be a minimum 37,700 pounds.
- 3.1.2 Total minimum operating weight may include lubricants, coolant, full fuel tank(s), operator (175 lbs.), 14 foot moldboard with hydraulic tilt and side shift, forward scarifier, full height ROPS cab, specified wheel and tire size and engine compartment doors in addition to other specified accessories and options. Items not to be included in this weight requirement are; wheel weights, weight filled tires, spare tire(s) with wheel(s), push block/plate, front mounted plow, or snow wing, assemblies.

3.2 Frame: Articulated with articulation between 20 and 22 degrees, left and right.

3.3 Steering:

- 3.3.1 Full power assist.
- 3.3.2 Turning Radius (outside front tire – using front wheel steering, frame articulation, and with differential unlocked): 26 feet maximum.
- 3.3.3 **Supplemental Emergency Power Steering: (OPTIONAL ITEM– Refer to Section III - Price Schedule)**
 - 3.3.3.1 To include emergency power assist for steering during engine power loss.

3.4 Front Axle:

- 3.4.1 Wheel Lean: 18 degrees left and 18 degrees right, minimum.
- 3.4.2 Axle Oscillation: 16 degrees up and 16 degrees down, minimum.
- 3.4.3 Axle Ground Clearance: 22.5 inches minimum.
- 3.4.4 To be equipped with thermal relief valve in leaning wheel circuit.

3.5 Brakes (Three independent systems required):

- 3.5.1 Service brakes: To be wet (oil) disc, adjustment free, foot operated, power boosted, air or hydraulic providing braking of rear tandem wheels.
- 3.5.2 Secondary (backup) braking system:
 - 3.5.2.1 Dual circuit system with an individual circuit to each tandem to provide backup braking in the event of loss of service brake capacity.
 - 3.5.2.2 In the event that only one (1) circuit is operational, the machine will still have sufficient braking capacity for emergency stops.
- 3.5.3 Parking brake: Hand operated parking brake independent of other braking systems, capable of holding machine on 20 percent grade.
- 3.5.4 All brake lines within 24 inches of the tires will have heavy-duty brake line covers to prevent damage from tire chains.

3.5.5 Air Dryer:

3.5.5.1 To be included on systems with air brakes.

3.5.5.2 To be mounted where easily accessible for servicing.

3.6 Tires and Wheels:

3.6.1 Seven (7) tires, including spare, shall be *BRIDGESTONE* Model VSW V-Steel Snow Wedge or *GOODYEAR* Model AS-3A(G-3) or *MICHELIN* Model SXNOPLUS M&S, 14.00R24, radial, on demountable rims. The front and rear tires shall be of the same size.

3.6.1.1 ***NOTE: All subsequent tire substitutions, due only to non-availability of the above tires, must be approved by the Contracting Office prior to shipment. The request must include the make, size and tread pattern for approval.***

3.6.2 The front and rear wheels shall be interchangeable.

3.6.3 To include spare wheel and mounted tire, shipped loose.

3.6.4 Wheels to have 10-inch minimum rim width and be three (3) piece.

3.6.5 Tire Studs for *BRIDGESTONE*: **(OPTIONAL ITEM, Pricing is not required – Refer to Section III - Price Schedule)**

3.6.5.1 Carbide impregnated, carbide embedded, #19, ¼ (0.25) inch diameter shank.

3.6.5.2 *BRIDGESTONE* tires to have every lug in the second row from each outer edge (both sides of tire) studded.

3.7 Tire Chain Clearance:

3.7.1 Motor grader is not to have any fixture or lines within 24 inches of any tire (level ground) and not protected, such as brake, air, hydraulic, or electrical, which may be damaged because of a broken chain link.

3.8 Tire Chains:

3.8.1 To include six (6) each PEERLESS model 2615.

3.8.2 To include appropriate heavy-duty chain repair tool bar.

3.9 Hitch: Each unit to be equipped with rear pin type tow hitch of sufficient strength to tow unit.

4.0 ELECTRICAL:

4.1 24 volt system.

4.2 Alternator: Minimum amperage of 115 percent of total draw of all electrical components including VHF radio and optional lighting.

4.3 Batteries: Minimum total CCA of 1800 at minus 20 degrees Fahrenheit.

- 4.4 Battery Box:
 - 4.4.1 Shall be metal with metal cover (or inside the engine compartment) with hold-downs for batteries.
 - 4.4.2 Constructed and located in such a manner to minimize damage from obstacles such as broken chain links, mud, and snow while grader is in operation, and in such a manner that cover may be lifted and batteries removed without obstruction.
- 4.5 Master Switch:
 - 4.5.1 Single high-ampere, wired in ground loop to cut off power source from battery to ground and remainder of electrical system. To be *POLLACK* Model 51-904 with 51-303 face plate or *COLE HERSEE* #284-02 or *CATERPILLAR* equivalent.
 - 4.5.2 Located where accessible but not ordinarily visible to persons unfamiliar with machine.
- 4.6 Jump Starting Hookup:
 - 4.6.1 To make jump starting less time consuming and safer, the following is to be provided.
 - 4.6.2 Two (2) each panel mounted receptacles (utilizing a panel mount plate) are to be mounted through the engine cowling near the batteries and hooked to the batteries with minimum 2/0 battery cable.
 - 4.6.3 The mounting plate shall be clearly marked for polarity. The mounting plate shall include heavy-duty identification plates(s) with a minimum size of 4x4 inches for both the positive and negative receptacles. The plates shall include the appropriate "+" or "-" sign, the appropriate "12 VOLTS" or "24 VOLTS" and be appropriately colored as red for positive and black for negative.
- 4.7 Toggle switches controlling electrical components to be metal (plastic rocker type switches are acceptable).
- 4.8 All wiring to be enclosed in non-metallic weatherproof loom.
- 4.9 Lighting:
 - 4.9.1 Headlights: To be halogen, two (2) on top front of cab.
 - 4.9.1.1 Note: When equipped with a front mounted multi-directional plow, the halogen headlights located over front wheels are to be high enough to shine over the plow when plow is raised all the way up.
 - 4.9.2 Work Lights:
 - 4.9.2.1 To be halogen, swivel type, flood, 35 watt minimum.
 - 4.9.2.2 Six (6) each total; two (2) mounted above blade circle, two (2) blade lights on bottom front of cab, and minimum two (2) rear flood lights (swivel type) mounted near the top rear of engine compartment.

- 4.9.2.3 Graders with snow wing attachment shall have minimum of one (1) additional light mounted on top right side of cab.
- 4.9.3 Refer to drawing (State Drawing #3B, dated 2/08/95) showing approximate headlight and work light mounting locations located at the end of the bid package:
- 4.9.4 Tail lights, back-up lights, brake lights, front and rear turn signals with emergency hazard circuit and instrument lighting to be included.
- 4.9.5 Strobe Lights:
 - 4.9.5.1 Two (2) each *WHELEN* LED L31 Series strobe lights, synchronized.
 - 4.9.5.2 Left strobe lens (*WHELEN* Model L31HAF4) to be amber.
 - 4.9.5.3 Right strobe lens (*WHELEN* Model L31HBF4) to be blue.
 - 4.9.5.4 To include "On/Off" switch.
 - 4.9.5.5 To include "auto intensity" sensor.
 - 4.9.5.6 Location: On top of the cab, visible from all directions
 - 4.9.5.7 *WHELEN* sales representative:
 - 4.9.5.7.1 Kent Bruce
 - 4.9.5.7.2 Cell Phone: (206) 510-2060
 - 4.9.5.7.3 Email: kdbco@comcast.net
- 4.9.6 All lighting to conform to DOT federal regulations.

5.0 CAB:

- 5.1 EROPS (Enclosed Roll Over Protection System):
 - 5.1.1 OEM, fully enclosed, steel, full height, fully insulated, sound suppressed, pressurized, meeting ROPS standards with shatterproof glass (laminated grade) in windshield. To have lockable doors.
 - 5.1.2 Heaters:
 - 5.1.2.1 OEM heater to be a minimum 40,000 BTU, hot water type, dual fan configuration, independently switched, with high/low switch.
 - 5.1.2.2 Air intake for heater to be filtered and drawn in from top of cab. If secondary heater's air is drawn from outside, it too shall be filtered.
 - 5.1.3 Defroster Fan(s):
 - 5.1.3.1 To be included, unless OEM heater defrosters are capable of keeping windows fog free at all ambient operating temperatures.
 - 5.1.3.2 To be caged, two (2) speeds, separately switched.
 - 5.1.3.3 May be located in left and/or right upper rear corner and/or upper right front corner of the cab.

- 5.1.4 Air Conditioning: OEM Standard.
- 5.1.5 Window Wipers and Washers:
 - 5.1.5.1 Power operated, front and rear, plus front lower window wipers and washers.
 - 5.1.5.2 To include OEM minimum two (2) speed controls for upper front and rear wipers.
- 5.1.6 Seat: Suspension type, cloth, shall be fully adjustable with tilt-up armrests. Vinyl covering is not acceptable.
- 5.1.7 Seat belt included to conform to SAE-386 JUN85.
- 5.1.8 All operating controls including power control levers shall be located in such a position as to be within easy reach of the operator.
- 5.1.9 To include fully adjustable control console and steering wheel or joystick steering.
- 5.1.10 Visibility must be such that the operator can clearly observe his work from sitting position, to both sides, as well as front and rear.
- 5.1.11 Panoramic convex mirror, minimum of 50 square inches, mounted inside cab in upper front.
- 5.1.12 Outside rear view mirrors, two (2) each, *WEST COAST* type, heated (to include on/off switch), corrosion proof, minimum 88 square inches, mounted front left and right corners.
- 5.1.13 To include an OEM weather resistant toolbox mounted in an accessible location. Cab mounted is not required.

6.0 INSTRUMENTATION:

- 6.1 All gauges as noted below shall read in U.S. units of measure (not metric) at time of delivery.
- 6.2 All gauges and/or indicators are to be in plain view of operator, and include as a minimum:
 - 6.2.1 OEM's electronic monitoring system(s).
 - 6.2.2 Tachometer.
 - 6.2.3 Engine Coolant:
 - 6.2.3.1 High temperature (to include visual warning system).
 - 6.2.3.2 Low level (to include visual warning system).
 - 6.2.4 Engine oil pressure (to include visual warning system).
 - 6.2.5 Ammeter or voltmeter gauge, or indicator light.
 - 6.2.6 Hour meter, mounted in cab, running engine activated.
 - 6.2.7 Fuel level gauge.
 - 6.2.8 Air pressure (if air system equipped, to include audio and visual warning system).

6.2.9 Transmission temperature.

6.2.10 Parking brake "ON" indicator light (flashing type, or light and buzzer).

7.0 HYDRAULIC SYSTEM:

- 7.1 Power Control: To be direct acting hydraulic, with suitable hand operated control levers. Operating control system shall be designed to withstand the maximum stress imposed on it. Any ball joints and split bearings shall be provided with adequate means of taking up wear.
- 7.2 Pump:
 - 7.2.1 To be closed center variable pressure type displacement piston pump, developing pressures not greater than 3,500 PSI.
 - 7.2.2 To include hydraulic bypass for cold starting, or no load system.
- 7.3 To include canister or spin-on type hydraulic oil filter, minimum 10 micron or *CATERPILLAR* 20 micron in the tank filter. Servicing of filter to be accomplished without having to drain oil from the tank or excessive loss of oil.
- 7.4 Hydraulic tank to have easy access to fill cap and level indicator.
- 7.5 Lift Circuit:
 - 7.5.1 Designed to provide system relief from shock loading.
 - 7.5.2 Blade lift accumulators are required.
- 7.6 Shock Load Protection: To include a pressure relief system to reduce shock loading and minimize impact damage to the circle and moldboard systems. Can be by the use of a slip clutch, accumulator, relief valve or other appropriate mechanism(s) or design. Relief setting(s) to be approximately 500 PSI above system working pressure.
- 7.7 Anti-drift Mechanism: System shall include hydraulic or pilot operated antidrift check valves or similar arrangement to minimize cylinder drift on blade lift, tilt, circle shift, articulation, and wheel lean.
- 7.8 Moldboard Float:
 - 7.8.1 To include cab controlled hydraulic moldboard float valves (each side to be separately controlled), with electric or mechanical control, controlling moldboard in float position.
 - 7.8.2 To further provide controlled bypass for hydraulic fluid to lift cylinders, permitting moldboard to raise and lower automatically in snow and ice removal operations.
- 7.9 **Rear Hydraulics:**
 - 7.9.1 To include six (6) in-cab control and hydraulic lines to the front and the rear of the unit for ordered or future attachments. Lines are to be capped off when not utilized.
- 7.10 Thermo reliefs to be in all blade and attachment lift hydraulic circuits to protect circuits from expansion due to temperature changes.

7.11 Hydraulic hoses or valves in the operator's cab are not acceptable.

7.12 Hydraulic hoses, at articulation points are to be armor wrapped.

8.0 BLADE ASSEMBLY:

8.1 Moldboard:

8.1.1 Length: 14 feet. Blade extension(s) are not acceptable.

8.1.2 Minimum of 22.5 inches in height and minimum of 7/8 (0.875) inch thick. Height measurement is to be taken on outside of moldboard curvature (dimensions do not include cutting edge). (Change as per Amendment #3)

8.1.3 Hydraulic side shift and hydraulic tilt to be included.

8.1.3.1 Note: Moldboard side shift cylinder to be mounted as to expose the cylinder ram on the left side (street-side) of unit to prevent cylinder ram damage from right side (curbside) mounted wing mast.

8.1.4 The moldboard is to be constructed of high carbon steel, securely mounted to prevent displacement or chattering in any position and shall be designed to give a rolling tumble to materials.

8.1.5 Cutting Edge:

8.1.5.1 In lieu of standard cutting edge, to be equipped with replaceable bolt-on *KENNEMETAL* Dual-Carbide-Insert, or *BLACK CAT* Dual Carbide Blades, or equivalent, cutting edge with 3/4 (0.75) inch diameter grade eight (8) plow bolts and nuts on six (6) inch centers, and end bits of alloy or high carbon steel.

8.1.5.2 The main body of the cutting edge blade to be minimum 7/8 (0.875) inch thick.

8.1.5.2.1 Inserts to reduce to 5/8 inch are to be provided (shipped loose).

8.1.6 End Bits:

8.1.6.1 To be hardened, minimum 5/8 (0.625) inch thick with 3/4 (0.75) inch diameter grade eight (8) plow bolts and nuts.

8.1.6.1.1 Inserts to reduce to 5/8 inch are to be provided (shipped loose).

8.2 Moldboard Range:

8.2.1 Reach of specified 14 foot moldboard beyond outer edge of tires on both left and right side, to average minimum 75 inches.

8.2.2 Moldboard slide both left and right, to average minimum 23 inches.

8.2.3 Circle side shift both left and right, to average minimum 25 inches.

8.2.4 Blade tilt forward minimum 40 degrees, tilt back maximum five (5) degrees.

- 8.2.5 High Lift: For bank sloping angle to the right and to the left, 90 degrees minimum.
- 8.2.6 Moldboard (not cutting edge) ground clearance with blade centered not less than 17½ (17.5) inches.
- 8.2.7 Full hydraulic (manual adjustments not acceptable).
- 8.2.8 Blade down pressure (static force which may be applied by the moldboard), 17,970 pounds minimum. To be obtained by having the moldboard tilted all the way forward and 90 degrees to the grader. A push block or front mounted dozer blade assembly will not be allowed to obtain minimum down pressure.
 - 8.2.8.1 Since some of the units being purchased without the scarifier, as noted in item 10.2, only a scarifier equipped unit will be required to meet the 19,000 pound requirement.

9.0 CIRCLE ASSEMBLY:

- 9.1 Machine shall be equipped with a full circle drawbar suspension and a provision to adjust for wear.
- 9.2 The circle rotation shall operate through 360 degrees. The circle power shall be sufficient to permit blade rotation under full blade load (material to be gravel).
- 9.3 Circle drive system to have a relief mechanism to guard against damage caused by sudden impacts or shock loading at high speeds.
- 9.4 Circle turn to be hydraulic motor gearbox type system. (Added as per Amendment #3)

10.0 ATTACHMENTS:

- 10.1 **Push Block:** (OPTIONAL ITEM – Refer to Section III - Price Schedule)
 - 10.1.1 **A push block is required to be ordered on all units not equipped with a front mounted State Class #866 Multi-Directional Plow)**
 - 10.1.2 To be an OEM front mounted push block, bolt-on.
- 10.2 **Scarifier, Mid-Mount:** (OPTIONAL ITEM - Refer to Section III - Price Schedule)
 - 10.2.1 Shall be equipped with scarifier assembly, mounted between the moldboard and the front wheels, providing a cut of minimum 46 inches wide. To have a minimum of eleven (11) slots with removable shanks and replaceable points.
 - 10.2.2 Electric over hydraulic controls are acceptable.
 - 10.2.3 Scarifier is to be so designed and located so that it remains functional when a class #866 multi-directional plow and a class #856 Snow Wing are mounted and being used.

- 10.3 **Snow Wing (State Class #856-12'): (OPTIONAL ITEM – Refer to Section III - Price Schedule)**
- 10.3.1 Installed right-hand rear mounted 12 foot snow wing. To be *CATERPILLAR* Work Tool by *WELDCO-BEALES* or *HENKE* Model AWH-12 or *RYLIND* Model RW-12H or *VOLVO* or *WELDCO-BEALES*, provided the following specifications are met.
 - 10.3.2 Controls: When available, the controls are to be on the right hand bank. The benching control may be located to the left of the operator.
 - 10.3.3 Front wing mast to be mounted such that the motor grader can:
 - 10.3.3.1 Utilize optimum moldboard angle (minimum 40 degrees for both moldboards), operator visibility, and tire chain clearance.
 - 10.3.3.2 Provide moldboard inboard and outboard float system.
 - 10.3.4 Direct hydraulic wing with hydraulic rear brace height adjustment (cable design is not acceptable).
 - 10.3.5 To include compression spring and shear pin in rear strut.
 - 10.3.6 All hydraulic cylinders to be dual action type.
 - 10.3.7 All hydraulic lines and control valves to be of sufficient size to optimize hydraulic response in cold weather operations.
 - 10.3.8 Moldboard to be smooth rolled and designed to maximize rolling action of the snow.
 - 10.3.9 Moldboard Thickness: Minimum 3/16 (0.1875) inch.
 - 10.3.10 Moldboard Dimensions:
 - 10.3.10.1 Nose Height: Minimum 28 inches. Measurement is to be taken on outside of moldboard curvature and is not to include cutting edge height to moldboard.
 - 10.3.10.2 Discharge Height: Minimum 42 inch. Measurement is to be taken on outside of moldboard curvature and is not to include cutting edge height to moldboard.
 - 10.3.10.3 Benching Height: Minimum 60 inch (vertical distance).
 - 10.3.10.4 Cutting Edge Length: Minimum 12 foot.
 - 10.3.11 Cutting Edge:
 - 10.3.11.1 In lieu of standard cutting edge, to be equipped with replaceable bolt-on *KENNEMETAL* Dual-Carbide-Insert, or equivalent, cutting edge with minimum 5/8 (0.625) inch diameter grade eight (8) plow bolts and nuts on six (6) inch centers.
 - 10.3.11.2 The main body of the cutting edge blade to be minimum 7/8 (0.875) inch thick.
 - 10.3.12 End bits to be of alloy or high carbon steel and include 5/8 (0.625) inch diameter grade eight (8) plow bolts and nuts.

10.4 **Multi-Directional Heavy-Duty Plow (State Class #866): (OPTIONAL ITEM – Refer to Section III - Price Schedule)**

- 10.4.1 To be front mounted with full hydraulic controls. To be *CATERPILLAR* Work Tool by *WELDCO-BEALES* or *HENKE FV-12* or *WELDCO-BEALES*, provided all of the following specifications are met.
- 10.4.2 To include adjustable and replaceable mushroom design shoes.
- 10.4.3 Blade angle cylinders to include accumulator system or hydraulic cross-over relief(s).
- 10.4.4 Clearing width, minimum 133 inches, in bulldozer position.
- 10.4.5 Center blade height, minimum 40 inches.
- 10.4.6 Tip blade height, minimum 46 inches.
- 10.4.7 Center Cutting Edge(s):
 - 10.4.7.1 In lieu of standard cutting edge, to be equipped with replaceable bolt-on *KENNEMETAL* Dual-Carbide-Insert, or equivalent, cutting edge with 5/8 (0.625) inch diameter grade eight (8) plow bolts and nuts on six (6) inch centers.
 - 10.4.7.2 The main body of the cutting edge blade to be minimum 7/8 (0.875) inch thick.
 - 10.4.7.3 To include AASHTO punching including 5/8 (0.625) inch AASHTO punching on three (3) three (3) six (6) six (6) - - - - six (6) six (6) three (3) three (3) inch centers.
 - 10.4.7.3.1 Example for eight (8) foot moldboard:
 - 10.4.7.3.2 3-3-6-6-6-6-6-6-6-6-6-6-6-6-6-3-3
- 10.4.8 To include valves, controls and lines necessary for installation and full operation.
 - 10.4.8.1 Lift circuit to include detented valve for float position.
- 10.4.9 Hydraulic lines must be secured and wrapped in wear areas to prevent chaffing.
- 10.4.10 To be equipped with mechanical quick disconnect allowing easy removal of the plow assembly without having to remove pins. The hydraulic lines are to include quick connect fittings with chained caps at the grader end (hoses to stay with plow).

11.0 VHF RADIO: (OPTIONAL ITEM – Refer to Section III - Price Schedule)

- 11.1 Mobile: *ICOM* Model IC-A110 Version 5 VHF (AM) aeronautical band, complete with noise canceling microphone, external speaker, external transmit/receive antenna mounted on cab, and to include frequency(s) as listed on the State's Purchase Order.
- 11.2 Installation:
 - 11.2.1 Speaker shall be mounted in cab so the operator can hear with engine running at full power.
 - 11.2.2 Main unit to be shock mounted.
 - 11.2.3 Installation to be performed by holder of a current FCC Radio Telephone license (copy of certification to be provided with delivery of unit).
- 11.3 Headset:
 - 11.3.1 Listen only headset, *PELTOR* Model 7050 or Model HTM7A-02.
 - 11.3.2 When requested, the VHF radio must be equipped with an easy accessed and labeled, headset jack. The speaker(s) described above would still be required so that unit could be used with or without the listen only headset.

12.0 TRAINING: (OPTIONAL ITEM – Refer to Section III - Price Schedule)

- 12.1 Total of 16 hours at State Equipment Fleet Maintenance Facilities located in **ANCHORAGE**.
- 12.2 Contractor to provide a qualified factory trained instructor(s), within 30 days of acceptance by the State. Please give advance notice to the District Equipment Manager.
- 12.3 To include a minimum of eight (8) hours of operator training including the following, as a minimum applicable agenda:
 - 12.3.1 Operating procedures per operating manual.
 - 12.3.2 Break-in procedures.
 - 12.3.3 Equipment limitations.
 - 12.3.4 Operator maintenance.
 - 12.3.5 Before operations checks and lubrication.
 - 12.3.6 Safety.
 - 12.3.7 Cold weather operations.
 - 12.3.8 Jump starting.
 - 12.3.9 Welding on equipment.
 - 12.3.10 Towing or transporting equipment.
 - 12.3.11 Instruments and controls.
 - 12.3.12 Gauge interpretation.
 - 12.3.13 Equipment operation, Do's and Don'ts.

- 12.3.14 Attachment operation, Do's and Don'ts.
- 12.4 To include a minimum of eight (8) hours of mechanics (Journeyman level) training including the following theory, trouble shooting, and test procedures for, as a minimum applicable agenda:
 - 12.4.1 Electronics.
 - 12.4.2 Electrical.
 - 12.4.3 Hydraulics.
 - 12.4.4 Air system.
 - 12.4.5 Drive train.
 - 12.4.6 Engine and transmission electronics.

13.0 MISCELLANEOUS:

- 13.1 Weight Scale Ticket:
 - 13.1.1 Required not later than time of delivery.
 - 13.1.2 To include all items, as ordered, but without operator
 - 13.1.3 Also refer to Section III – Special Terms and Conditions, paragraph 9.0.
- 13.2 Hydraulic Hoses: All hydraulic hoses are to be Arctic Grade to minus 40 degrees Fahrenheit, minimum.
- 13.3 Special Lubricants: If, for warranty purposes, manufacturer's specific lubricants are required, vendor is to provide these lubricants, or provide, at time of delivery, a cross reference chart between manufacturer's lubricants and any name brand and readily available equivalents.
- 13.4 Vandalism Protection:
 - 13.4.1 Shall include locks for batteries, fuel tank, hydraulic tank, engine lube oil filler, and radiator.
 - 13.4.2 Locking panels for compartments are acceptable.
 - 13.4.3 If padlocks are utilized, they shall be keyed alike (OEM, meaning that one key will fit all loaders of the same make).
 - 13.4.4 Three (3) sets of keys, minimum, to be provided.
- 13.5 Backup Alarm: Electronic, self-adjusting sound level, *ACORN PRODUCTS* Model 1D-112AA, *ECCO* Models S901 or SA914 or SA917, *PRECO* Model Preco-Matic 1040, *STAR* Model Starmatic 63-000, *TARGET TECH* Model 210504, *VELVAC* Model 697066 or *WARN* Model Reactor 2100504, located on rear of unit, as per manufacturer's recommendations.
- 13.6 Warranty: Five (5) year two (2) part warranty at assigned location, per Section III - Special Terms and Conditions.
- 13.7 Paint: Manufacturer's standard yellow.
- 13.8 **Publications:** **(OPTIONAL ITEM – Refer to Section III - Price Schedule)**

- 13.8.1 To include parts, service, and operator's manuals, per Section III - Special Terms and Conditions, paragraph 7.0.
- 13.9 Delivery Reminder: The State does not take delivery until the unit is complete, meeting all required specifications, and is assembled (by the contractor or the contractor's subcontractor).
- 13.10 **Final Inspections: (OPTIONAL ITEM – Refer to Section III - Price Schedule)**
 - 13.10.1 Prior to shipment to final destination, **a completed unit**, component equipment, and accessories shall be inspected and/or tested by the contractor for compliance with specifications. This inspection must be completed prior to arrival of the State inspection team.
 - 13.10.2 The contractor shall provide full access to the State inspection team.
 - 13.10.3 These inspections by the State shall be thorough and very critical, and will encompass a complete review of the specifications. Adequate time and technical personnel shall be made available to assist the State in these inspections.
 - 13.10.4 Inspection trip costs. The contractor will supply round trip coach ("Y") airfare (not supersaver), with open arrival and departure times, for two (2) inspectors to the contractor's point of final assembly. Both inspectors will depart from **ANCHORAGE**. If the unit is coming through Anchorage, the inspection could be held at the vendor's Anchorage facility.
 - 13.10.4.1 Per diem for each of the two (2) inspectors shall be at a rate of \$150.00 per day each. Out of state would require 3-days (travel day, inspection day, and travel day). Per diem checks will be issued (prior to travel) to the individual traveler, not to the State of Alaska.
 - 13.10.4.2 The successful vendor shall assist by booking lodging reservations. Meals and lodging will be paid by the State inspectors.
 - 13.10.4.3 All ground transportation necessary to conduct the inspection including one (1) full size vehicle (Chevy Impala, Ford Taurus, or equivalent), for the State inspection team.
 - 13.10.4.4 While the State recognizes contractual responsibility in testing, the State reserves the exclusive right to reduce the number of inspectors when and if that action seems prudent. If the number of inspectors is reduced, the Contractor will return to the State all monies saved by that action within thirty (30) days following the actual inspection.
 - 13.10.5 It shall be the responsibility of the State inspection team to technically inspect and test the unit for compliance with the specifications.
 - 13.10.6 It shall be the responsibility of the Contracting Authority Representative to observe the inspection and test to assure compliance with the published terms, conditions, and specifications of the contract, and to mediate any

disputes, which may arise between the contractor and the Department of Transportation's representatives.

- 13.10.7 FINAL ACCEPTANCE REMINDER: Final acceptance is at final destination; however, all major tests will be conducted at the contractor's place of business unless the State has reason to believe alterations or damages have taken place which may have changed the performance or design characteristics of the unit since the time of inspection at the contractor's location.
- 13.11 A final inspection of the unit will be conducted at FOB point to assure that the unit still meets specifications.

END OF SPECIFICATION #353-AIP

END OF CONTRACT